Considerations
BEARING ON
OUR PRESENT KNOWLEDGE OF FEVER.

A First Lecture.

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(*Concluded from p. 933.*)

NOW, with reference to fevers, I wish to draw your attention to the fact that we are able to be clear upon the idea of kind, both in the wider and the more restricted sense which I have just laid before you; and that in this relation of kind fevers differ from all other classes of diseases; at least this is true of the contagious fevers, in which the disorder is propagated in a manner only comparable to descent by generation. Indeed, one of the most practical of the fruits of wisdom which experience will develop in you when you have seen much of professional work amongst families will be the readier conclusion of the nature of an attack of illness by tracing the kind of fever to which a child has been exposed. And, again, it may be said that the chief evidence of the distinctness of kind among some of these contagious fevers has been obtained through most patient investigation and watching of local epidemic attacks of one fever or the other, by which it has been proved that each disease spreads in its own kind, and not in any other. This is the only conclusive argument to prove that typhus fever is distinct from typhoid fever; for all the differences which I shall have to detail to you as characterising typhus in its divergence from typhoid might be differences through accidents. I have seen a very crowded outburst of typhoid eruption amongst the rash in typhus, and *vice versâ*. Ulcerated intestine might be a character superadded to some cases of typhus, as pneumonia is superadded to some cases of measles, or as diphtheritic disease of the fauces is fatally superadded to some cases of scarlatina. But when you find typhoid always breed typhoid, and typhus always breed typhus, then all question as to distinctness of kind ceases, or at least lapses into the more general question, whether species of fever can be constant when, as modern biology has shown or brought up to a general belief amongst all biologists, no species of any living thing either is constant or ever has been constant. Not that this last reflection brings existing species nearer each other; for though they vary they do not vary towards each other, but always away from each other. They ever diverge; cats never varying to become dogs, nor dogs to become cats; so typhus never varies to become typhoid, nor typhoid to become typhus. This certainty of kind in fevers marks a vast difference in their nature and relations as compared with those diseases which I shall have to introduce before you when speaking of disorders of the lungs, heart, and brain. I shall then detail to you the characters of many things spoken of as kinds of diseases; but the word kind is much looser here, and indeed has only a quite vague and popular application. I remember being amused by a passage in some story. The author had got one of his characters into a hospital, and made a little poor fun in setting out the effect said as how the thing what No. 3 has got in his head is the same as No. 6 has got in his stomach."

I suppose that the clinical teacher must have been asserting in the hearing of the author of this character that inflammation of the brain was of the same kind as inflammation of the peritoneum, and if the question was raised, Is meningitis the same thing as peritonitis? you would certainly see that meningitis differs from peritonitis, not like typhus and typhoid differ as generated kinds differ from each other, but meningitis and peritonitis would be always held to differ by differences untraceable in their nature, as the purple and white foxglove differ, so long as you considered them to be separated by the inalienable peculiarities of origin and relationship which separate the meninges from the peritoneal sac. But if you think that the physiologist and the pathologist could really set forth and explain all the differences between these membranes, then would peritonitis and meningitis differ in kind to you only when you used the word kind in a vague popular way, as when one might say that a knife is a different kind of a thing from scissors, or a pen from ink, in which case the phrase "different kind" means no more than that the differences are untraceable as regards the intents and purposes before you at the time. In short, popularly the word "kind" is applied to things in virtue of any likeness sufficient for the purposes of the occasion. This digression has been so long and our progress in the direct line so short, that you may scarcely remember that we digressed from the question, What are the general facts common to the several kinds of fever? into the question, What do you mean by a kind of fever? And now we must go back to the original question, and I must proceed to show you what those general facts are which are common to all fevers.

Stay though, we must have another digression, for I am afraid you might be content to regard every distinct kind of fever merely as a distinct sort of fever, and thus to ignore the relations of the several kinds of fever to one another. But if you take the facts of the several kinds of fever you will find that there are some of these facts special to each distinct kind, and others that are general to several of the kinds. And on perceiving and admitting this you must perforce regard the group of kinds of fever which have general facts amongst them, which facts are common to all of the group, but absent from all other kinds not included in the group. I say you must regard the group of kinds which have the common characters as in some sort genera of fever. And when you further find that some of the groups of kinds have facts common to such groups but absent from other groups, the groups thus connected must associate themselves into yet more general groups which become orders. So that, for example, Mr. Jones's fever has characters which bring it together with all cases of scarlatina, but amongst those scarlatinal characters is the fact of shorter duration, which makes scarlatina differ from continued fevers, but agree with a group including measles and small-pox, &c. But, again, amongst the characters common to all the group so included are some characters, such as the possession of a specific eruption, which bring Mr. Jones's scarlatina into association with the more continued fevers, typhus, typhoid, &c., but which separate it from all non-eruptive fevers. Mr. Jones thus becomes a case of the species scarlatina of the genus not continued of the order eruptive of the class contagious fevers, and thus you, as it were, perceive whereabouts Mr. Jones hangs upon the family tree of fevers, and you view his position with a greater total comprehension. Such a family tree view is a nosological view of fevers. You can construct such a tree as to

PYREXIA OR FEVER.

PRIMARY.					SECONDARY.	
CONTAGIOUS.			NON-CONTAGIOUS.		CONTAGIOUS:	NON-CONTAGIOUS:
ERUPTIVE.		NOT ERUPTIVE.	*Miasmatic:*	*Autogenetic:*	Epidemic wound fevers. Erysipelas.	Pneumonia and other inflammatory fevers.
Continued:	*Brief:*					
Typhus.	Small-pox.	Whooping-cough.	Intermittent.	Rheumatic.		
Typhoid.	Measles.	Influenza.	Remittent.	Gouty.		
Relapsing.	Scarlet fever.	Erysipelas.		Erythema nodosum.		
	Röthela.					
	Roseola.					

the family of fevers, but not as to other diseases. The nosology of other diseases is only an appendix of the anatomical and physiological arrangement of the several organs and parts of the body.

You will, I daresay, remember that all the while our question is, What are the general facts common to the several kinds of fevers? Well, now, you can see that we have reached a point from which we are at an advantage in solving that question. For when we have recognised what are the general facts that form the bonds of association of the several generations and families of fevers, then, as we have seen that these facts are themselves the principles of medicine with regard to fevers, we find that we thus reach at once our general principles, and can study them with due observance of their order of succession in importance. The facts common to the most inclusive group will be the most general facts and principles, and so on with less general facts to the less inclusive groups. Now, if you look at this scheme of fever, you observe that the most general division of fever is into primary and secondary fever. This is, indeed, not only the first in the order of nosology, but the first in practical application. In every case of fever that comes before you the first question is, Is it primary or secondary fever? One question only can precede this—namely, Is it a fever at all? What is fever? In its most general sense fever is still febris, fervid heat, and its only and sufficient criterion is heat. Not the feeling of heat. A patient may feel hot to you or to himself when he is really not so, and may be shivering with cold when he is thermometrically very hot, as in the cold stage of ague. But since the introduction of the clinical thermometer you can easily be quite sure of fever, or, as in this widest and most general sense it is more properly termed, pyrexia. You decide it by the thermometer. If his temperature is above 100° the patient has pyrexia. But in a vast proportion of cases pyrexia or feverishness is secondary to inflammation; and, in fact, before you pronounce a case to be fever you must be sure there is no local cause on which the pyrexia depends. Search for local inflammation. If there is no local inflammation, then it is fever, and it is called primary, or essential fever, or "fever" as distinguished from mere pyrexia. The next great characteristic, in which you find the first line of division of essential fevers is the character of contagiousness. This, too, is not merely first in order of generality, but in order of practical importance. When you are sure that the case is some kind of essential fever you will be asked by the friends, Is it contagious? A very serious consideration, on which depends the taking of immediate steps to ensure the safety of those around, steps which are annoying, troublesome, and costly, and which therefore must not heedlessly be enforced, but which are so imperative when necessary that there is no forgiveness if you fail to take them in due time.

And here I think it will be well to consider in a general way, and once for all, the great fact of contagion which is common to the more dreaded and deadly of the fevers. What do we know about contagion? Well, we seem on the very brink of knowing all about it, and yet we must perhaps on that very account be cautious. It is well to be circumspect on brinks. And the attitude of science is properly one of caution, especially of caution against the very probable. Science used to be always being misled by the probable. Therefore now let us challenge strictly all evidence when a general conclusion is to be drawn. The general conclusion is none other than that all contagious fevers arise through the entrance into the system of what are called "germs," and that these germs are of the nature of living organisms, such as have from the first microscopical ages been known to microscopists as bacteria spirillum, micrococcus, &c. Many an hour have I spent in watching these, but never thought of associating them or any of their kind with fever; yet what I witnessed many years ago might have awoke a quicker perception to the anticipation of recent discoveries. I was watching floscularia, a stationary species of rotifer, resembling a relatively large bell with a Japanese quaintness of design about its figure. These creatures had come in large numbers in the aquarium at my dining-room window. Their textures are entirely transparent, and I was discovering their sense organs and the ganglion that represents their brain, and in particular I was watching the curious disappearance of a pair of bright-red eyes, which these creatures possess whilst they are young and active,—eyes which, like some other creatures, they lose when they grow old and acquire established positions. But, to my great sorrow, my floscularias, which had been thriving and multiplying freely, began to die away before I could finish all the observations I had hoped to include in a paper which is in the Linnæan Society Transactions. As the creatures sickened they became turbid instead of clear; and whilst I was endeavouring to follow the nerves from the ganglia I saw that the obscurity which clouded them was due to the presence of countless bacteria, exactly such as I am now familiar with in Koch's figures. I now know that I was witnessing an epidemic of bacterium fever in a population of floscularias, but I was not seer enough to see what was before me then, as I looked for and thought only of nerves.

In 1873, Oberheimer of Berlin discovered spirillum in the blood of persons suffering from relapsing fever; and the fact that such organisms are in the blood in relapsing fever is beyond all question. This discovery might at first seem only a further extension of the knowledge we have of scabies through the finding of the itch insect. But there is this vital difference, that whilst the itch insect is living his quiet little life as an unwelcome guest, he creates no general disturbance except for some importunate sensations; whereas when spirillum gets into the system there is fever, and indeed intense fever. Evidently, then, the spirillum has a much more intimate and general relation with the system than the itch insect has, and it becomes a most interesting question what those relations really are. The facts are simple enough; indeed, are they not precisely such as science has long been aware of as occurring in the popularly well-known processes of vinous and acetous fermentation? In the fermentation and in the fever have we not definite systems of turbulent changes determined by the presence of living germs? Even before the discovery of the yeast plant fever was seen to resemble fermentation. Well, there we have a familiar and apparently close analogy to incline us to the view that relapsing fever, at least, is a colonisation by foreign living creatures which in some way breed a poison, or which, as some think, fill up and choke the life out of vital parts of the frame. This is a simple and plain view, and is easily accepted and understood. But the truth may not be so simple and plain, and I wish to draw your attention to an alternative view. This alternative view will appear to you if we ask the question, Are these spirilla—which, by the way, much resemble some spermatozoids—spermatic in any sense useful to recognise? Are they the offspring of the human body endowed with powers to disturb the vital processes of other human bodies? In a general way, there is a range wherein life and fever show enough in common to have been more than merely poetically or metaphorically parallel. For fever is like life in having its times of duration limited though uncertain, and in having its stages so that you can anticipate them, and you can recognise whether the fever is a young or an old fever; and, as our very question shows, fevers reproduce their kind. Here, then, are all the characters of a life: its uncertain yet sure limits; its stages of development; its power of reproducing itself. And so a fever might appear to be another life lived in and by its sufferer, and the human fevers would thus become, as it were, episodic lives supplementing human life; so that you have not quite lived until you have had your fevers; though it may be found for you that you have quite lived when in the middle of one of them.

There may be too much of some sorts of life. In strychnia poisoning or in laryngismus stridulus, for instance, the convulsions themselves cause death. But convulsion is itself an act of life, and so you may die by too much life. Life is a paradox, look at it as you will. You know that from the chemist's point of view life ought to settle itself at once by the several elements obtaining their favourite affinities, and being forthwith satisfied, which they never do until life is over. Life is such a paradox. But from my present point of view life itself is, as it were, a protracted infection of the germ by the sperm, and the living body remains during its life germinal to other infections when suitable spermatic elements come in contact. If this view seems to you more fanciful and supported by less analogy than the fermentation theory, I will at once put before you what is a serious difficulty in accepting the fermentation theory of fever. On this theory is it not very difficult to explain how it comes to pass that one attack of a contagious fever protects from the danger of that fever ever after? This, as we shall subsequently see, is not strictly true, but it is generally true. If fever is merely colonisation with germs who feed upon and live in the body, why should they not come and feed and live again? The only explanation I remember to have seen offered is that the unsophisticated human frame is born

with a small amount of some very special food of which the fever germs are very fond, and it is supposed that these little organisms are so fastidious, that they will not take any other nourishment, so that when they have consumed the whole supply of this kind of food, they die or depart to other feeding-grounds. Now, seeing that according to biological science these germs are only protoplasm, it would be very surprising if it turned out to be true that minute unspecialised organisms such as swarm in every puddle where organic decay is progressing should refuse to accept any nutriment other than some inborn kind of delicacy; and when you reflect that there must be a number of these delicacies, for no fever germs will pasture on the food of others, and in fact the ambrosia of one is caviare to the rest, it puts no little strain on the highest genius for imaginative scientific belief to suppose that we are all sent into the world each to bear a little special supply for the several kinds of fever germs to thrive upon.

On what seemed to you perhaps the more fanciful view we may suppose that the human frame can cast off spermatic elements which when they enter other human frames engage in an activity remotely like that which originates germination, so that for awhile, if I may so speak, the protracted germination which constitutes life is itself reinfected and diverted. We may suppose that this activity constitutes the fever; and that when once the fever is over and its life lived, it does not return. Were this really the case, would you not expect that these episodial lives would be most probably lived during the actively growing germinal years of earlier existence, or, in other words, would not the fevers attack children? Which indeed they do. Again, if you suppose the immunity from subsequent attacks which fever affords to be due to exhaustion of materials suitable to the parasitic germs, how can you explain those rather frequent cases in which typhoid fever or measles repeats its attack upon the convalescent patient, and even recurs a third time after defervescence? For if you suppose the immunity to be due to exhaustion of a material suitable to the parasitic germs, how can you explain the reappearance of the fever, and therefore of the germs with their supplies, just after the cessation of the first typhoid attack has shown that all supplies were exhausted? But if you concede that this proves the immunity in question not to be due to such exhaustion of supply, then how do you at all explain that subsequent immunity which is so marked and so happy a feature in the history of contagious diseases?

Well, then, the recurrence of typhoid fever cannot be a question of food of the germs. And if not, we must suppose that the repetition which makes three typhoids is due to some measure of time in the life of the typhoid germs themselves, so that each brood lives just the time of one attack, and the next attack is due to other broods whose life has a time limit equal to that of the fever. But these germs are minute unspecialised particles, which reach their little perfection with extreme rapidity, and all that is known of their rate of growth is the reverse of conformable to periods of fever measured by weeks.

On the other hand, if we suppose the fever process to be an episodic vital action between the elements of texture of different individuals, there is nothing contradictory in supposing such vital actions to be sometimes lived through a second or even a third time. Not long ago at the Pathological Society, there was under debate a question how we should explain the late manifestations of so-called tertiary syphilis and the syphilisation of the fœtus whose mothers, having passed through the disorder, are not then actively diseased. And I endeavoured to show that these and similar facts are explicable by assuming that tissue of recent origin, or tissue by chance left unsyphilised during the syphilitic fever, undergoes impregnation with the syphilis germs which chance to come from habituated older parts of the frame into contact with the new tissue, either through such an intercommunication of the several parts of the frame as is supposed in Darwin's theory of paragenesis, or, else, in the more easily understood instance of the syphilitic fœtus, through the blood of the mother. And I pointed out that the observations of Mr. Tomes on the Haversian spaces of bones, proving that fresh texture arises and replaces old texture in the life of adult bones; that these observations make it probable that similar new formation occurs in other textures, giving rise to new-formed tissue, which would be germinal to or capable of vitally receiving any poison which might be transmitted to it from the already syphilised general textures. If this is true, though I now cannot give you all the evidence in favour of such a view, then, in tertiary syphilis we have occurring within the body of one and the same individual an infection of young and virgin tissue by the poisonous offsets of older tissues charged with a cause of infection to which those older tissues are themselves no longer susceptible. Such a fact would form a step towards the admission of a like infection by the tissues of an habituated individual of the tissues of another not yet habituated.

But I have hitherto overlooked a branch of evidence of the existence of which you must be duly apprised. Though I may be allowed to deal judicially with the facts as offered, and facts are offered by the most accredited observers which would go to prove that the germs of a fever to which mice are subject can be grown into a fungus which produces spores, and that the spores of this fungus will reproduce the fever in other mice, whilst the fungus threads fail to do so unless spores be present. Such researches are, of course, very elaborate, and when admiring the thoroughness and continuity of the work, and the skill and foresight displayed in the views of the experimenters, we must recognise also the extreme difficulties in avoiding fallacy, and the corresponding possibility that fallacy was not avoided; for to obtain the germs of fever about the 10,000th or 20,000th of an inch large, and to plant them and grow them to a fungus, you must be able to follow their individuality; nay, you should never, if possible, lose sight of the individuals. It would be well to identify these germs; and, indeed, it would be much more secure if they could be marked—say, for instance, by tying little bits of blue ribbon upon them to distinguish them from the infinitude of vulgar multitudes of other germs everywhere around them. And it might be said that these germs did deserve such a token of distinction on account of the sober way in which they behave exactly according to what the commanders in the experiment expected of them. Indeed, if you will trail a little poetry amongst bacteria, they are so numerous and light that they will gather around and give body enough to the form of your conception so as to make good your theory and set it going in living shape; and a biological theory will have a very happy life when enclosed in a body of active germinal infective protoplasm. It is, indeed, the most fashionable creation of the period. But one must not speak irreverently of protoplasm, and our subject is all too serious. The question may appear a very narrow one when we ask whether fever germs are independent parasitic organisms on the one hand, or specialised parts belonging to the human species originally taking their life from the human body. But to be stuffed with foreign germs is really so very different a thing from having your texture life set into new vital action by spermatic particles from the texture of another person, that it would be well to know which is the truth, if we can only find it out. As to the coarser view which has been advanced, to the effect that the merely mechanical action of fermentation germs may cause the phenomena and fatality of fever, we are not without an instance to show us what really are the consequences of the presence in immense numbers of microscopic organisms in the human blood. The recent discoveries concerning filaria sanguinis hominis show that these minute worms may exist in myriads and circulate with the blood without producing any fever, and, indeed, without causing any grave symptoms, and this when these worms are so numerous as to be immediately found in every drop of blood examined. Indeed, the history of filaria sanguinis hominis seems almost to give a crucial negative to any theory which would suppose fever to arise from a merely mechanical action of germs—that is, through mechanical obstruction produced by the germs. For when we thus speak of fever germs as perhaps always present in the blood, you must not suppose that one only has to get a microscope and a slide and put a little fever blood under it to find it full of germs. No, try in any of our cases of typhoid in the wards and you will find these germs by no means very easily discovered or obvious things. At the outset of such an inquiry you must take notice that the blood serum is often crowded with minute particles which must not be confounded with bacteria, and which exist often to a large extent in the blood of healthy persons. During last winter clinical session some of my most acute and intelligent friends, perhaps now present, searched carefully for germs in the blood of several severe typhoid cases. The result was that one bacterium was seen, only one, but I was told it was a very active one. When I say that Mr. Booth saw it, you will know it was

well seen, for we all regard Mr. Booth as one of the very ablest and very best students at Guy's, but perhaps the main fact was that all were quite sure that there was only one bacterium. Next lecture we will take up in detail the consideration of the history of contagion.

A CASE OF ULCERATIVE ENDOCARDITIS WITH PYÆMIC SYMPTOMS.

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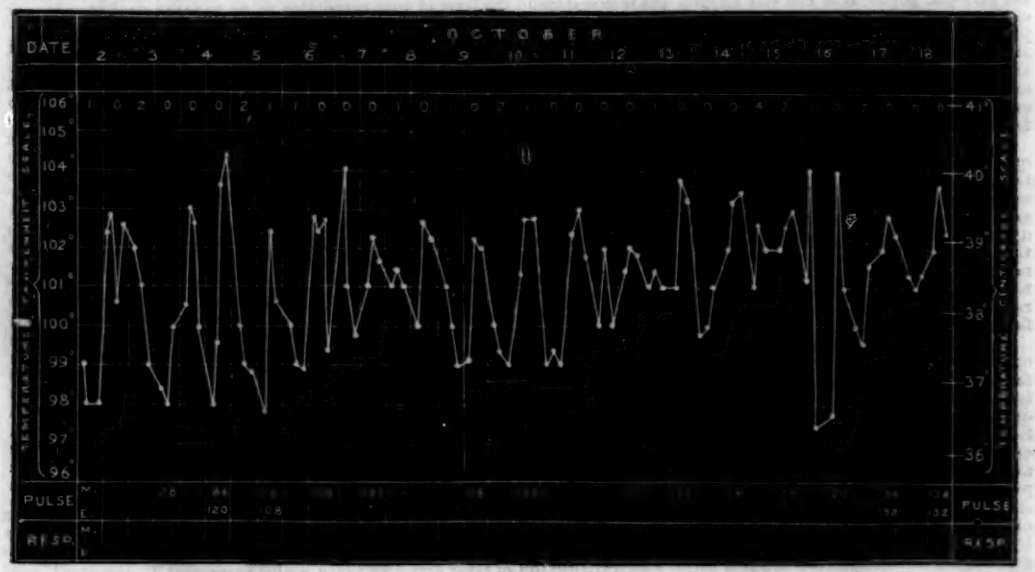
ATTENTION has lately been drawn by Dr. Sidney Coupland, Dr. Wilks, and others, to a rare and interesting form of ulcerative endocarditis with pyæmic symptoms. In most, if not all, of the cases there has been old valvular mischief of the heart, upon which the fresh ulceration has been grafted, and some importance has been attached to the presence of former cardiac mischief. In the following case the symptoms came on during the course of a first attack of rheumatic fever, the heart being quite sound; and it has this further interest, that the case is absolutely complete, having been under observation from the first appearance of the rheumatic fever until the closing scene. I am indebted to Mr. C. A. Wigan, resident medical officer, for the carefully prepared notes of the case.

M. J——, aged twenty-two, a single woman, was admitted into Charing-cross Hospital, under the care of Dr. Pollock, on Sept. 7th, 1882, suffering from a first attack of acute rheumatism. On admission she complained of pain in both knees and ankles and in the shoulder of the left arm. She also had some pain and stiffness in the joints of the right hand. Temperature 101·2°; pulse 84; heart normal, with no irregularity nor bruit. From her previous history she appears to have had measles when an infant, but no other serious complaint. Her father died of pleurisy (double) aged forty-four; had always been a healthy man. Her mother is still alive and healthy. Three brothers and five sisters alive and healthy; four died quite young. The patient states that on Sept. 3rd, the day before she felt ill, she had a hot bath and went out for a walk directly afterwards in the rain, and got wet through. The same night she felt chilly and sick, and vomited shortly after getting into bed a greenish fluid with a bitter taste. Patient got no rest during the night, owing to the feeling of sickness, which continued. The next day (Sept. 4th) she got up. She did not complain of any chilliness or fever, but felt some stiffness and experienced loss of power in the left shoulder. On the 5th the joints in both legs became painful and swollen, so a doctor was sent for, who recommended her to go into a hospital, and accordingly she was admitted into Charing-cross Hospital on Sept. 7th.

Her temperature on admission was 101·2°, and the pulse 84. There was the usual sour-smelling sweat, and the urine was high-coloured and acid, but otherwise normal. The heart was carefully examined, and found to be normal. As the bowels were confined, she was ordered ten grains of colocynth and calomel pill for that night, and the following mixture: Salicylate of soda, fifteen grains; carbonate of ammonia, four grains; decoction of cinchona, one ounce, every six hours. A chart of the temperature, taken every four hours, was started.—Sept. 3rd: No change in temperature. The urine contained no albumen, but was found to be very acid, and thirty grains of bicarbonate of potash and three grains of iodide of potash were added to the mixture. Pills repeated. The patient shortly lost all pain in the right arm, both knees, and ankles, but suffered much in her left shoulder and arm, the slightest movement causing great pain. Pulse about 90; heart normal.—28th: Patient still complains of great pain in the left arm, especially in the muscles of the upper part. The temperature at 6 P.M. was 102·8°, consequently the old mixture was discontinued, and the following ordered:—Sulphate of quinine, two grains; carbonate of ammonia, two grains; bicarbonate of potash, twenty grains; chloroform water, two drachms; to one ounce of water: to be taken three times a day. This seemed to have a very beneficial effect, as the temperature fell to normal, and remained so until the morning of October 2nd, when at 9 A.M., without any apparent cause, she was seized with a severe rigor, lasting fifteen minutes, and followed by a profuse sweat. The temperature ran up from 98° to 102·4°, but fell at 2 P.M. to 100·6°; rising again to 102·6° at 6 P.M.—3rd: The temperature at 2 P.M. was 98°, but another rigor, as severe as before, occurred at 12 P.M., the temperature



rising to 103°.—4th: Another rigor at 6 P.M.; temperature 104·4°.—6th: Another rigor at 9 A.M.; temperature 102·8°. The rigors were followed by a profuse sweat in a quarter of an hour. Up to this date the heart-sounds had been normal, and excepting some increase at the time of the rigors, the pulse-rate had varied from 76 to 96 per minute; but on the morning of the 6th a very soft and indistinct whiff was heard with the first sound at the apex of the heart. This gradually developed, until, on the morning of the 12th, a characteristic murmur was plainly heard at the apex with the first sound, and was gradually lost when traced into the axilla.—14th: Three grains of the sulphate of quinine were given in milk three times a day, and four ounces of brandy per diem. —16th: The murmur is now very dis-

tinct, and is rasping in character. It can be heard all over the chest. A very wide range of temperature was noted to-day—104° at 2 A.M., 97° at 6 A.M., 104° at 2 P.M., and 101° at 6 P.M.—17th: Up to this date the breathing has been fairly good, and not much increased in rate; but to-day she has had a short and irritating cough. Respiratory murmur harsh, no dulness on percussion, slight amount of sputum. The pulse was quickened considerably, being 138 in the morning and 132 in the evening. — 18th: The variations in temperature are not so severe; it now ranges between 101° and 103°; pulse still 138. Cough harder, sputa more abundant, and rather rusty. Respiratory murmur harsher; dyspnœa at times. She complains of loss of appetite and a feeling of sickness, and has not slept for two nights. Ordered solution of hydrochlorate of morphia, five minims; nitrate of bismuth, ten grains; bicarbonate of soda, ten grains; compound tragacanth powder, ten grains; to one ounce of water: to be taken at bedtime. This had a good effect, and she slept for five hours. — 19th: Dyspnœa has a good deal increased. The cough is irritable; sputum very rusty, almost red, but with a greenish-purple tint here and there. Some dulness and bronchial breathing over both bases. Pulse 138 in the morning and 150 in the evening. The cardiac bruit is very loud and harsh. Brandy increased to eight ounces. — 20th: Dyspnœa very marked. Pulse 138. Dulness on percussion most distinct over the middle of the left lower lobe. Temperature 103·6°. — 21st: Breathing very laboured; respiration 56. Very small crepitation over the left lower lobe; coarse râles over the right base. Temperature 101°; pulse 138, very feeble, and evidently failing. Sputa free in quantity, of a dark-prune colour. Very small amount of urine passed; sp. gr. 1021, and a trace of albumen for the first time.—22nd: At 2 A.M. the patient was comatose, the pulse being just perceptible. Death took place quietly two hours later.

Necropsy, thirty-four hours after death. — The body was well nourished; some rigor mortis still present, and no external appearances of disease. On opening the chest, the left side was found to be full of fluid; there was also some, but less, in the right. The left lung was indurated about its middle third, and the upper part of the lower lobe was of a dark prune colour, with granular consolidation, and readily broken down. There were evidently two or three infarctions of recent date. The rest of the lung contained a small amount of serum, but was otherwise healthy. The right lung was the seat of four or five indurated patches, the result of pyæmic pneumonia, and also contained some serum. The heart weighed nine ounces and a half. The wall of the left ventricle was somewhat thickened, and there was recent ulceration on the right border of the mitral valve, and around it some exuberant vegetations, soft and easily detached. These were continuous for nearly an inch along the right border of the valve. No atheroma, no other valvular mischief. The liver was normal, weight fifty-one ounces. The spleen normal, weight eight ounces and a half. The kidneys weighed nine ounces and a half. Their capsules were slightly adherent, and the pyramids congested, otherwise healthy. Brain normal, weight forty ounces.

Remarks. — Ulcerative endocarditis with pyæmic symptoms must be very rare. I have watched with much interest the course of a large number of cases of acute rheumatism, many of which were accompanied by valvular cardiac disease, but the above case is the first of its kind that I have come across. What is it that determines the pyæmic symptoms? Presumably the presence in the blood of minute organisms—microzymes; but how they get there is as yet unexplained. As Dr. Burdon-Sanderson has pointed out,[1] it is necessary for the production of infective disease that there should be present at the same time inflammation and bacteria; either may exist alone, but no pyæmic symptoms result. In the foregoing case the absence of all trace of metastatic abscesses in the liver, spleen, and kidneys is rather remarkable. The chief evidence of the existence of pyæmic dissemination was found in the lungs, and during life the sputa were very characteristic. The treatment of ulcerative endocarditis with pyæmia is most unsatisfactory. None of the ordinary remedies had any real effect, nor did large doses of alcohol sensibly improve matters. I wish now that I had tried the inhalation of carbolic acid, or the carbolate of iodine, and I would suggest giving such a line of treatment a fair trial in any cases of the kind, especially where the lungs appear to be much affected.

Harley-street, W.

[1] Lumleian Lectures, 1882

REMARKS UPON THE OSSEOUS LESIONS OF LOCOMOTOR ATAXY,

WITH A CASE SIMULATING MALIGNANT DISEASE.

BY J. ALEX. WILLIAMS, M.B., M.R.C.S.,

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THE conspicuous absence from our museums, previous to the researches of Charcot, of specimens illustrating the osseous and articular lesions of locomotor ataxy, induced Sir James Paget[1] during the meeting of the late International Congress to ask Professor Charcot, "Whether these are not instances of a disease which has lately for the first time appeared, or at least has lately become much more frequent than formerly it was?" Now with all due deference to so great an authority, I cannot but think that their more frequent recognition in modern times is mainly owing to the increased facilities afforded us for the diagnosis of the disease in its early or pre-ataxic stage, and this is chiefly due to the labours of Duchenne, Westphal, Erb, Hutchinson, Jackson, Charcot, Buzzard, Robertson, and many others. For Professor Erb[2] writes, "this arthropathy is most common in the early stages of tabes, and chiefly in the preliminary period before the ataxic disturbances of motion have appeared, and when the lancinating pains constitute the chief feature of the complaint," and this assertion I believe holds good for the osseous lesions. Hence it is highly probable before the diagnostic significance of "lightning pains," ocular paresis, and Westphal's symptom were known, that many cases presenting tabetic arthropathies, or osseous lesions, were diagnosed as examples of rheumatoid arthritis, or of malignant disease of bone, &c., as might easily have been done in the case now recorded. The frequency with which patients describe their pains as "rheumatic" is strong presumption in favour of this view. Dr. Hughlings-Jackson,[3] referring to a case of tabes whose only symptom besides lightning pains was the Argyll-Robertson pupil, says "the case might be taken for one of neuralgia only by those who have not studied lightning pains, and who do not examine the pupils." Dr. Buzzard in a foot-note to his paper[4] upon the subject, says, referring to the arthropathies, "In most of those which I have published, the nature of the underlying disease had never been suspected." He instances a case in which excision of the knee-joint was very nearly performed in a surgical ward of a hospital; also of two other patients, inmates of surgical wards, who had been exhibited to candidates at an examination for a diploma as examples of rheumatoid arthritis. Charcot, in answer to a remark of this same authority, complaining of their rarity in England, said, "You will find them in the workhouse infirmaries, and in the surgical wards of hospitals." How true this remark was recorded cases testify.

In addition to the case I am about to record, in which, although the tabetic symptoms were recognised, a diagnosis of malignant disease was nearly completed and operative procedures almost resorted to, I can remember the case of a middle-aged man who came under my observation for incontinence of urine, at a time when I was house-physician to Dr. Gilbart Smith at the London Hospital, under whose care he was admitted. Here none of the ordinary causes of incontinence could be found, but the right hip-joint was much enlarged and disorganised by large irregular bony outgrowths, which also projected into the pelvis. The patient, a dull stupid man, had never before noticed the enlargement around the joint, but he walked lame with that foot. On inquiry into his history it was found that his lameness dated from an injury received some six or seven years previously, in which he said his hip had been dislocated by its entanglement in a cart wheel. Further inquiries elicited the fact that he was the subject of marked ataxic symptoms; thus he had been subject for many years to sciatica, his pupils presented the Argyll-Robertson phenomenon, and there was a total absence of knee-jerk in both knees. He walked with the

[1] Transactions, vol. i., p. 129.

[2] Ziemssen's Cyclopædia of Medicine, vol. xiii., p. 126.

[3] On the Eye Symptoms in Locomotor Ataxy, Ophthalmological Society's Transactions, vol. i.

[4] On the Affection of Bones and Joints in Locomotor Ataxy, &c., Brit. Med. Jour., March 5th, 1881.

aid of a stick, and had a somewhat ataxic strut, which, however, might have been due to his lameness. The eyesight was not affected, and so far as I remember the optic discs were normal. There had been no gastric crises. He was seen by Dr. Jackson and Mr. Hutchinson, both of whom confirmed Dr. Smith's diagnosis of ataxy, and considered the osseous material surrounding the joint to be unabsorbed callus, produced in excess in an ataxic patient, as a result of previous injury to the femur close to its neck. Now, such a case, in the event of the pain not having been inquired after, and the eye and knee phenomena not tested, might readily have passed for a severe example of rheumatic arthritis, or even of malignant disease of the bone.

From the analogy which these trophic changes in bones and joints present to the arrest of the growth of bones often observed in infantile paralysis, they have been assumed by Charcot to be due to implication of the anterior cornua of the grey matter in the sclerotic process. Buzzard, on the other hand, having observed gastric crises to be more frequent in these cases, has suggested sclerosal invasion of the roots of the vagus nerve as the cause of the altered nutrition in the osseous system. Neither of these theories, however, has been satisfactorily borne out by anatomical observations, and it is to be noted that in neither of the cases here referred to were gastric crises observed. Charcot, when demonstrating the arthropathies upon the wax model of Berthelot, before the late International Medical Congress, remarked[a] that "fracture of the bones and diseases of the joints appear to belong to the same pathological condition—i.e., when the disease attacks the diaphyses of the bone, the atrophy is proved by fracture; when it attacks the joints, we get the wasting of the head of the bone with erosion of the surface." In this case nearly all the larger articulations were affected, and there was an excessive production of callus around an old fracture of the right pelvic bone upon its inner surface. In the main these arthropathies are characterised by a rapid and sudden effusion of serous fluid into a joint, the knee most frequently, usually unattended by inflammatory symptoms, but followed by rapid erosion and absorption of the articular extremities, with relaxation or destruction of ligaments; the joint becomes flail-like, and dislocations readily occur. Such a condition might readily be mistaken for a simple hydrops articuli were the ataxic symptoms neglected. The swelling is never entirely confined to the joint itself, but is diffuse and often extends over the entire extremity, and large osseous outgrowths often occur around implicated joints. The rapidity with which these changes are produced in ataxy is peculiar, a few days sometimes sufficing for the complete destruction of a joint (Buzzard). Osseous lesions often coexist with arthropathies, and *vice versâ*. They are characterised by abnormal brittleness of bone, due to a rarefying osteitis, whereby the Haversian canals become abnormally widened at the expense of the osseous matrix—as a result spontaneous fractures from the slightest movements, such as turning in bed, &c., are of frequent occurrence. These fractures seem to possess great reparative power, and "it is common to find a more than usually exuberant callus thrown out" (Buzzard). This statement is typically illustrated by the following case, in which from slight muscular exertion the right femur became spontaneously fractured, rapidly followed by an excessive production of callus, causing great swelling of the affected thigh, and in its clinical aspects closely simulating malignant disease.

Philip H——, aged forty, street musician, was readmitted into the Royal Portsmouth Hospital on July 2nd, 1882, under the care of Mr. Rundle, with a fracture of the right femur. He gave the following account of his accident:—On April 23rd, when taking off his boot, he crossed the right leg over the left knee, but meeting with some difficulty in pulling at the boot, he gave the leg "an ugly strain," producing what on admission, the same evening, proved to be a transverse fracture of the right femur at the junction of its middle and lower thirds. The fracture was treated with plaster-of-Paris splint encasing the foot, thigh, and pelvis, and thus far successfully that on June 18th there was good bony union, and he was discharged cured, the leg for a short distance above and below the site of fracture being encased in a short plaster-of-Paris splint. No excess of callus was then observed. When at home, he said everything progressed satisfactorily, and, with the exception of slight pain beneath the splint, he had nothing to complain of. In about a week he discontinued the use of the splint, but remained cautious in his movements upon crutches. On July 1st, in walking across his room, he incautiously placed his body weight upon the injured leg, and immediately felt it give way beneath him. Next day, when brought to the hospital, he was found to have refractured his right femur at the seat of the former lesion. Next morning (July 3rd) the limb was observed to be much swollen, and very painful. In its lower two-thirds the femur appeared immensely thickened, by a hard and osseous-feeling material, which below terminated abruptly at the knee-joint, posteriorly the popliteal space was almost entirely filled by a similar material; above the thickening gradually terminated so that the upper third of the femur felt normal. The superficial veins of the thigh were very conspicuous; but the inguinal glands were not enlarged. Circumferential measurements of the thighs in different positions showed a great increase in the size of the right thigh, thus:—

	Just above knee.		Middle of shaft.		Level of groin.
Left thigh,	12 in.	.....	15½ in.	.....	19 in.
Right ,,	16 ,,	.....	18¾ ,,	.....	19½ ,,

On inquiry into the general history of the patient the following was ascertained:—He had formerly been a cork-cutter by trade, but for the last six years has been blind, and has since earned his living by playing the concertina. When seven years of age a "gristly" tumour was removed from over the right inner malleolus, the scar of which is still visible. When fourteen years old he had a bubo in the right groin. He denied syphilis, but in addition to the scar in the groin he has numerous coppery scars on both shins and spots on the chest, and, besides, presented well-marked ataxic symptoms. Thus: he has been subject to sciatica for the last seven years. His eyesight failed him six years ago; it commenced as dimness of sight, which gradually got worse, so that he is now totally blind, even to the discernment of light. During the last two years he has walked badly; "staggers slightly;" this he attributed to his blindness. When in hospital it was observed that the pupils were unequal, the left being about the size of a No. 9, the right about the size of a No. 6 catheter on the English gauge. They presented the Argyll-Robertson phenomena—inactive to light, active during accommodation. There was well-marked white atrophy of both optic discs, and an entire absence of knee-jerk in the left knee; that in the right could not be tested on account of the fracture. There were no gastric crises. On account of the condition of the limb, malignant disease of the bone being suspected, no further treatment than placing the legs between sand bags was deemed necessary. It subsequently increased still further in size, and on July 5th attained its maximum measurements of: above the knee, 17½ in.; middle of shaft, 19½ in.; level of groin, 20 in. On July 17th, iodide of potassium was prescribed internally, and oleate of mercury inunctions applied locally. The limb, then, contrary to expectation, decreased gradually in size, and firm osseous union between the fractured ends resulted, so that on Sept. 23rd he was again discharged cured. At this time the limb measured: above the knee, 15 in.; middle of shaft, 17½ in.; level of groin, 19 in. There was still a large amount of unabsorbed callus surrounding the femur, most evident at the site of fracture and in the popliteal space. As a precaution, the limb was encased from the toes upwards in a stout plaster-of-Paris splint, and the patient warned to be very cautious in his movements and to use crutches.—Oct. 27th: Visited the patient at his home. He walks with aid of a stick, and has discontinued the use of a splint for two weeks past. The right knee, he says, feels very weak, and the ligaments are somewhat relaxed. Both knees present Westphal's symptom. The swelling of thigh has slightly decreased since last observation; it now measures: above the knee, 14½ in.; middle of shaft, 16 in.; level of groin, 19 in. There is still great excess of callus around lower two-thirds of femur, the upper third still being free. No glandular enlargements. The right foot has become œdematous during the last month, probably due to pressure upon the veins by the callus. The other symptoms are unaltered, and the fracture is firmly united.

Remarks.—This case affords a good illustration of most of the points previously referred to in the paper. The difficulties attending a correct diagnosis were such that at one time a consultation of the hospital staff was held to consider the advisability of amputation for malignant disease. Recognising, however, the difficulties attending the case in the absence of cachexia, glandular enlargements, and signs of

[a] Transactions, vol. i., p. 128.

secondary deposits it was thought best to watch its progress for a short period before resorting to operative procedure. The wisdom of this decision was subsequently proved by the slow but steady decrease in the swelling, and the unexpected repair of the fracture. The changes, in fact, so far as the callus was concerned, were regressive and reparative, not progressive and destructive, as in carcinoma, &c. It will be observed that the ataxic symptoms present were those which mainly belong to the pre-ataxic stage and were such that had the ocular and Westphal's symptoms been neglected the ataxy must have remained undiagnosed. Another noteworthy feature was the rapidity with which the callus was thrown out, for immediately after the second fracture when carefully examined by Mr. Claremont, the surgeon to the out-patients, no abnormal excess of callus or osseous material was observed. Yet forty-eight hours afterwards (July 3rd) when I first examined him there was then found a very excessive formation of callus as recorded in the notes. This fact becomes of special interest when we consider Buzzard's statement, previously referred to, regarding the rapidity with which the joints are sometimes destroyed in these cases.

For permission to record this case I am indebted to Mr. Rundle, under whose care he was admitted, and for many of the notes to my friend Mr. Cooke, the dresser to the case.

Portsmouth.

OIL OF TURPENTINE IN EGYPTIAN ENDEMIC HÆMATURIA (BILHARZIA HÆMATOBIA).

BY JOHN WORTABET, M.D.,

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MY attention was first drawn to endemic hæmaturia about five years ago. Since that date I had seen six cases, three of which I had under close observation for some time in the hospital, affording me a good opportunity of studying the disease and trying different methods of treatment. I am induced to give the results of this study with the hope that they may be useful to the surgeons of the British army now in Egypt, where they may have occasion to see and treat the disease. I shall first give the notes of my last case, in which the oil of turpentine produced a complete cure, and then offer some remarks on the general nature of endemic hæmaturia and its parasitic origin.

B. M——, a well-made young man, aged twenty years, and a native of Egypt. He was admitted into the hospital on June 2nd, 1882, and gave the following history of his case:—When he was twelve years of age he began to feel pain in voiding his urine, and wetted the bed every night. Four years ago he observed a small quantity of blood passing with his urine, or soon after it, and always with some pain. Latterly he had passed water about seven or eight times a day. At night he invariably had incontinence of urine and unconsciously wetted the bed. His strength was fair, but he was not able to sustain much or long-continued physical exertion. On his admission there was only a slight trace of anæmia, and with the exception of his urinary trouble he complained of nothing else. During his stay in the hospital the urine was examined frequently, often daily, and with the blood, ova and free embryos of the bilharzia were at first always and plentifully found. In other respects the urine was not much changed from the normal state. Soon after his admission he was prescribed large doses of quinine, taking the first day sixty grains, and forty grains on each subsequent day for five days. But there was no change in any of the symptoms, and the blood passed was as full of ova and living embryos as before.

On June 14th I ordered a teaspoonful of oil of turpentine with a little milk three times a day, and this treatment was continued to July 8th. The blood was examined almost daily, and I was gratified to observe that in a few days it presented only broken ova and what appeared to be the débris of dead embryos. On the 25th the blood ceased, the nocturnal incontinence of urine stopped, the strangury was less, and the calls for micturition were diminished.

On July 8th he seemed to be perfectly cured. There was no blood, no ova in the urine, no strangury, and no incontinence, but there was still abnormal frequency of voiding his urine. At this date the oil of turpentine was stopped. He had taken it for a little more than three weeks. He was retained another week in the hospital for further observation, and was dismissed on the 13th. I saw him again about six weeks afterwards, and he reported himself perfectly well, with the exception of a slight pain in passing his water. I examined his urine, and found it quite normal.

Remarks.—Though endemic hæmaturia has been long recognised as a distinct variety of bloody urine, its true nature and connexion with the parasite was discovered in 1851 by Bilharz, a professor of anatomy in the Egyptian Medical School, who, with Griesinger, found the worm in the portal, mesenteric, and vesical veins, thus accounting for the presence of its ova in the urine. Dr. John Harley and others saw and described a number of cases from the Cape of Good Hope; and Dr. William Roberts says that the disease has been identified in the Mauritius and Brazil. To this geographical distribution I can add Syria, at least the town of Jaffa, from which place I have seen one unmistakable case, and have heard of others there; but this is the only Syrian case I met, though I have carefully watched for the disease. Bilharz and Griesinger found the parasite in 117 cases of autopsy out of 363; and they believed that probably more than half of the native inhabitants of Egypt were victims of this disease. Sonsino found it in thirty cases out of fifty-four; and he believes that nearly all the natives of Egypt have it. The symptoms of the disease are few and simple, but well marked. The patient complains of passing a small quantity of blood, varying from a few drops to a teaspoonful, just at the end of making water, with a little pain, which continues for a short time afterwards. The frequency of micturition varies from half a dozen times to a dozen. There is always more or less anæmia and a sense of weakness after any ordinary exertion. The quantity and specific gravity of the urine are natural, but there is always blood, more or less of albumen, and an abnormal deposit of mucus. In bad cases the reaction is alkaline, and the sediment shows a number of crystals of triple phosphates, indicating some degree of chronic cystitis, for which the disease may be easily mistaken. The chief point of interest in examining the urine is the ova of the bilharzia, which are found in large numbers entangled in the clots, though they may be often seen free among the blood corpuscles. They may be detected by a low power, and can be afterwards examined with one moderately high. They are about $\frac{1}{120}$ of an inch long, quite ovoid in form, with a spike at one extremity, and once seen cannot be easily forgotten. When the ovum is carefully examined with a magnifying power of 250 or 300 diameters, the embryo is seen within it, having a distinct border of its own lying close to the egg-shell, except at the two extremities. In some of the ova, which appear to be in a more advanced state of maturity, but not in size, the embryo may be seen to expand and retract itself, probably in a fluid which lies between it and the egg-shell. Dr. Harley hatched the eggs by immersing them in water. A more expeditious way is to crush the egg and liberate the embryo by gently pressing the two glasses. This can be done while the eye watches the process from above, and it is interesting to see the egg broken and the living embryo emerging from the shell, and its cilia put at once into vigorous motion. Not unfrequently free embryos may be seen with their broken shells among the blood-cells, occasionally, in very fresh specimens, racing across the field with incredible velocity. The form of the embryo is also ovoid, not much larger than the egg, having a somewhat pointed extremity, which appears to be the head or mouth; and projecting from its sides from one end to the other are innumerable fine cilia, which appear to be always in motion, though the animalcule does not change its relative position. It is supposed that the embryo must undergo more than one transitional stage before it assumes its ultimate shape of the adult worm. The worm, which never comes out with the urine, is described by Bilharz as a filiform body measuring from three to four lines in length. The male is thicker than the female, and has a long canal into which the female is received during copulation. It inhabits the portal vein and its branches, and the vesical veins, and can be seen only after death in post-mortem examinations. Nothing definite is known of the diseases to which this parasite gives rise, except the hæmaturia above described. The mucous membrane of the intestines is said to be affected, occasioning dysenteric symptoms, and I have been told lately by a medical man from Egypt that in such cases he has sometimes brought down with the fingers from the rectum nodules

which were attached to the mucous membrane and which swarmed with ova. He has assured me also that the spine of these ova was lateral while that of the urinary ova was terminal. If this should be so, it would account for the statement of Bilharz and Griesinger as to some of the ova having lateral and others terminal spines, which has appeared strange to those who have, like myself, studied only the hæmaturic form. All seem to be agreed that the source of the parasite is infected and unfiltered water; and Sonsino adduces in support of this opinion the fact that Europeans and well-to-do natives never use the water of the Nile unfiltered, and are therefore exempt from the disease, while the lower classes use the water as it comes from the river and suffer accordingly. But I am not aware that anyone has seen the animalcule in infected waters. As a prophylactic measure it is suggested by Harley and Sonsino that drinking water should be conveyed in covered channels to prevent contamination by the excreta of persons infected with the parasite, that it should always be filtered, and that vegetables and fruits should be washed with filtered water before use. How the entozoon penetrates the bloodvessels and finds its natural habitat there is still a mystery. The size of the adult worm and of its ova and embryos precludes the idea that they can be carried through the capillaries or even through the smallest arteries and veins. In one of my cases I once opened a vein in the arm, but found no traces of the parasite in the blood. If the ovum or embryo be the starting-point, it is difficult to understand how they can enter through any part of the absorbent system into the bloodvessels. Dr. Harley supposes that during bathing the leech-like animal may lay its eggs through the skin into some superficial vein, or more likely find its way into the bladder through the urethra.

The case recorded above is the only one in which I succeeded in obtaining apparently a perfect cure. The drug used was oil of turpentine, given in teaspoonful doses three times a day, and continued for about three weeks. I had employed in my previous cases every method which I had read of, or which suggested itself to my mind, but without the slightest effect on the disease as such. When strong tonic medicines were given the general strength may have been slightly benefited; but the examination of the urine revealed in every case the persistence of the parasite. Among other things I tried ten-minim doses of oil of turpentine, with the same quantity of extract of male fern, and carbolic acid, by the mouth and hypodermically, for some weeks, until the system was thoroughly saturated with it, and the urine became smoky. Injections with one-scruple doses of iodide of potassium into the bladder, as recommended by Dr. Harley, I never employed as far as I could wish, and the result was abortive. But in the case he mentioned it does not appear that the success was all that could be desired, for "the patient still passed a few eggs . . . . and the ova were in a more lively condition."

P.S.—I should have preferred to delay this communication until I might have had another case for testing again the efficiency of the oil of turpentine; but in the present circumstances, when the disease is attracting so much attention, I thought it my duty to publish the only case of cure by medicinal treatment, so far as I know, and to leave to others, who are now seeing the disease, the opportunity of repeating the use of this drug, and finding out whether we have in it a real specific for endemic hæmaturia.

Beyrout, Syria.

VOLUNTEER AMBULANCE INSPECTION.—The annual inspection of the Ambulance Company of the Tower Hamlets Rifle Brigade took place on the 29th ult., at the Head-quarters, Hoxton. The class numbers thirty members, two or more men being taken from each company of the regiment for instruction in ambulance duties and stretcher drill. The Company was commanded by Surgeon Platt, assisted by Acting Surgeon A. O. White. The inspecting officer, Surgeon-General McKinnon, A.M.D., who was accompanied by Surgeon-Major Don, A.M.D., having witnessed the exercises of drill and stretcher duty, with the application of tourniquets, splints, and bandages, expressed himself as highly satisfied with the inspection. The result, he said, reflected great credit upon Surgeon Platt and the non-commissioned officers and men of the class; and he should have great pleasure in signing the War Office certificates of those members of the class who did not already possess them.

THE

CLINICAL CLASSIFICATION OF BACKWARD DISPLACEMENTS OF THE UTERUS.[1]

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IT is a truism in medicine that for treatment to be successful diagnosis must be accurate. The backward displacements of the uterus, retroversion and retroflexion, are met with sometimes without symptoms, sometimes with symptoms; and in the latter case the symptoms, in different instances, differ widely in kind as well as severity. In some cases the symptoms are removed with striking rapidity and completeness by mechanical treatment, while in others the same treatment entirely fails to relieve. Clearly, therefore, all cases of backward displacement of the uterus are not alike; and before we can treat them with any approach to certainty of result, we must be able to make a diagnosis between those cases which require a particular treatment and those which do not; in other words, they must be classified.

The classification at present most in favour depends upon the shape of the uterus: whether it is bent or not; the sharpness of the bending; the greater or less difficulty of straightening it or keeping it straight. Such a classification of course implies that bending is the important feature of the cases to be classified. I believe that bending of the uterus *per se* is, as a rule, an unimportant condition. I have set forth the reasons which induce me to take that view, so far as dysmenorrhœa is concerned, in papers communicated to the Obstetrical Society of London; and therefore I need not here again defend it. I will only make these assertions: that there are many cases in which symptoms associated with retroflexion will entirely disappear, without any appreciable alteration in the shape of the uterus having taken place; and that there are many others in which mechanical treatment, perfectly successful so far as removing the flexion is concerned, fails to remove the patient's symptoms. Cases such as these are not exceptional, but quite common. Of course there are others in which the reverse is the case. But the existence of the former class of cases is enough to show that a classification based merely on the shape of the uterus is not an adequate one, not one which helps in the treatment of backward displacements of the uterus.

To make clear the principles upon which I think that distinctions should be drawn between different cases of backward displacement, I would ask attention to the circumstances in which such displacements occur, and the conditions upon which, in my opinion, the symptoms connected with them depend.

The essential abnormal condition which produces these displacements is yielding of the pelvic floor—that is to say, the muscles, fasciæ, fat, and cellular tissue, which form, as Dr. D. B. Hart has pointed out, a compact layer closing the abdominal cavity below. I see no reason for attributing them to an isolated alteration in any single structure; for it has been shown by experiment[2] that different component parts of the pelvic floor may be separately divided without producing descent or displacement of the uterus. When slight yielding of the pelvic floor takes place, one of the first results is that the mobility of the uterus is increased, and that this organ slightly sinks. The greater mobility of the uterus which the loosening of its supports obviously involves allows it to fall either forwards or backwards. If it were rigid, a falling forwards or backwards of its body would be accompanied with a relative elevation of its cervix in the contrary direction, seeing that the uterus is most firmly fixed at about the level of the os internum. Often this is what takes place, and then we have anteversion or retroversion, as the case may be. But sometimes, instead of altering its position in the manner described, the uterus bends, the body thus sinking without much change in the position of the cervix. Retroversion and retroflexion are

[1] Read before the Hunterian Society.
[2] Savage: Surgery of the Female Pelvic Organs, 1876, Pl. xi. Hohl (quoted by Aran): Maladies de l'Utérus, p. 980.

thus results of a slight degree of prolapse. They are often, indeed, valuable indications of a slight yielding of the pelvic floor. There are cases in which the uterus, while the patient is in the ordinary obstetric position, is not measurably lower in the pelvis than natural, and yet we find symptoms. Did we look to the amount of descent of the uterus appreciable by the medical man as the indication for mechanical treatment, we should detect no necessity for it; but the version or flexion of the uterus reveals to us the altered condition of the uterine supports.

This, then, is the first point to which I would ask attention: that retroversion and retroflexion, when pathological, are alike results of slight yielding of the pelvic floor. Without such yielding they cause no symptoms. Their presence with symptoms is an indication of a degree of prolapse which may be too slight to be detected in the ordinary obstetric position, except by the alteration in the inclination and shape of the uterus.

The next thing to be borne in mind is that the most common cause of yielding of the pelvic floor is parturition and its effects. After delivery the pelvic floor should return practically to its condition before the pregnancy. But this is not always the case. From the injuries to the parts which attend childbearing, and from disturbances in the process of involution, some loss of tone in the pelvic floor frequently results. Hence we find prolapse, retroversion, and retroflexion, chiefly in women who have had children, and comparatively seldom in virgins. But parturition also brings with it an increased liability to many pelvic disorders: metritis, perimetritis, ovaritis, &c. These conditions are thus very commonly associated with backward displacement of the womb, simply because they are prone to occur in the same class of patients.

Anteversion and retroversion resemble one another in being alike results of slight prolapse. But the consequences of these displacements differ, for the reason that behind the uterus there is occasionally an anatomical disposition of parts to which there is nothing analogous in front of it. There are two folds of peritoneum, containing some muscular and fibrous tissue, running back from the neck of the uterus to the sacrum—the utero-sacral ligaments. These bands vary very much. Commonly they are small, wide apart, and loose; they may even not exist at all as visible folds of peritoneum. Sometimes they are so strong, tense, and close together that Douglas's pouch is a sac with a distinct and narrow neck. When this disposition of parts is present and the uterus becomes displaced backwards, its body may, by the intra-abdominal pressure acting on its anterior surface, be forced down into Douglas's pouch, against the margins of which the veins running in the broad ligaments, and returning the blood from the body of the uterus, will then be pressed. The return of blood from the uterus may thus be obstructed, and congestion of that organ be the consequence. The body of the uterus may even, there is reason to believe, be so far pushed down as to become grasped by the utero-sacral ligaments, and incarcerated in Douglas's pouch. It is rare to find these ligaments so tense and so close together as to be capable of grasping the body of the uterus. But it is not uncommon to find one or both of them quite strong enough to be capable of exerting pressure on the veins of the broad ligaments when the body of the uterus is pressed down between them.

The utero-sacral ligaments have another effect beside this. When strong and tense they tend to restrict movement of the neck of the uterus in a forward direction. Hence when, this condition of parts being present, the body of the uterus becomes displaced backwards, the utero-sacral ligaments prevent the cervix from moving upwards and forwards. The womb therefore bends, and retroflexion is the result, instead of retroversion, which would be the kind of displacement produced if the cervix were free to move.

I would now ask permission to briefly repeat the important points in what I have been saying:—

1. Backward displacement of the uterus, when pathological, is a result and indication of slight yielding of the pelvic floor.

2. It is prone to occur in the class of patients who are most liable to inflammatory and other diseases of the pelvic organs.

3. The disposition of parts behind the uterus is sometimes such that when the uterus falls backward, the veins which return the blood from it are pressed on, the return of blood is impeded, and the uterus becomes congested.

On this view of their pathology I would classify backward displacements as follows:—

1. Those which cause no symptoms of any kind.

2. Those in which the displacement (including under that term the totality of the conditions which produce it) is the only morbid condition present, and there is no congestion, the symptoms being those of prolapse only.

3. Those in which there is not only descent, but congestion of the uterus.

4. Those in which the displacement is complicated by other conditions, which may or may not be aggravated by it.

Upon each of these classes I would now offer some further remarks:—

1. It is difficult to get at a correct estimate, at least in this country, of the frequency with which retroversion and retroflexion occur without any symptoms; and it is not of great practical importance. Circumstances every now and then make it our duty to examine the pelvic organs, although the patient has never complained of any functional disturbance referable to them. No one can have made many such examinations without occasionally finding the uterus displaced backward; and from the few such patients whom one is required to examine, one may infer as to the many whom one does not examine that such displacements occur also in them. Further, retroversions and retroflexions have been found post mortem in patients who were known not to have any uterine symptoms during life. But the most important piece of evidence, from the large numbers of which it consists, is that furnished by Vedeler.[3] This physician, who practises in Christiania, examined 414 healthy virgins, and found the uterus retroverted in 45 of them, or 11 per cent., and retroflexed in 13, or 3 per cent. He also examined 506 healthy nulliparæ, and found retroversion present in 47, or 9 per cent., and retroflexion in 17, or 3 per cent. (I have myself examined 111 nulliparæ who sought advice not for uterine symptoms, but for local contagious disorders, and I found retroversion twice present and retroflexion once.) Vedeler also examined 584 healthy women, each of whom had had one or more children. Among these he found 57 retroversions, or 10 per cent., and 69 retroflexions, or 12 per cent. In all, out of 1504 healthy women, Vedeler found the uterus displaced backwards in 248, or 16·49 per cent. Out of 1158 women who were suffering from uterine symptoms, he found similar displacements present in 259, or 22·37 per cent. Other writers have published statistics showing the frequency of retroversion and retroflexion in patients not selected by their seeking treatment for uterine disease, as well as in fœtuses and children; but none have investigated such large numbers, or differentiated so carefully between the different classes of patients, as Vedeler. As evidence of his accuracy, I may compare one of his statistical statements with a similar one compiled from his own experience, by Dr. Grailly Hewitt.[4] This latter author, out of 1205 women suffering from uterine symptoms and examined by him, found retroflexion in 112, or 9·3 per cent. Vedeler, out of 1106 patients suffering from uterine disease, virgins being excluded, found retroflexion in 112, or 10·1 per cent. As retroflexion is not common in virgins, it is possible that if the few virgins probably included in Dr. Hewitt's tabular statement were subtracted from it, as they have been from Vedeler's, the result might be to make the percentage of retroflexions almost the same.

It is necessary, in classifying the backward displacements of the uterus, to recognise the frequent occurrence of these cases—viz., those without symptoms; because in practice it is essential that we should always bear in mind that as retroversion or retroflexion may exist in a healthy woman without causing symptoms, so either of these displacements may be present along with functional derangement, which it has no share whatever in producing or modifying.

(To be concluded.)

[3] Archiv für Gynäkologie, Band xix., S. 294.
[4] Diseases of Women, third edition, 1872, p. 5.

DR. HENRY BROWN, of Northallerton, Yorkshire, one of the honorary surgeons of the Northallerton Cottage Hospital, has tendered his resignation to the committee as medical attendant to that institution.

THE proceeds this year of the Hospital Saturday and Sunday collections in Manchester amount to £7537, being an aggregate increase of £1585 over the sum raised in 1881.

NEW SAFETY HYPODERMIC INJECTOR.

BY J. WARD COUSINS, M.D. LOND., F.R.C.S.,
SURGEON TO THE ROYAL PORTSMOUTH HOSPITAL.

DURING the last few years treatment by hypodermic injection has been very generally adopted in many forms of disease, and the number of remedies introduced into the system by this method has also steadily increased. Up to the present time the hypodermic syringe has been the only instrument employed by medical men, and the great demand has resulted in the production of many new forms and many ingenious modifications. It is, however, a very general opinion that the syringe does not even now readily and conveniently fulfil all the purposes for which it is required in practice. It is easily deranged, very liable to accidental injury, and always requires very careful manipulation. In any form it must be considered a costly instrument, and certainly very troublesome to clean. When not in daily use it soon gets out of order, and the piston is a constant source of trouble. The washer shrinks or becomes worn and loose, so that the syringe does not work well, and often the operator discovers to his great vexation that the fluid, instead of entering the patient, gradually makes its appearance at the other end of the barrel. I am sure there are few medical men constantly employing hypodermic remedies who have not been disappointed by the faulty action and sudden failure of this delicate little instrument. The vast majority of practitioners, moreover, employ the same syringe for every emergency, and in the case of those who are fortunate enough to possess two such instruments it will be very frequently found that one of them at least is broken or otherwise out of order. The same hypodermic syringe is used for every patient as well as for every remedy, and in fact for every purpose for which it is required both in medical and surgical practice. Sometimes morphia has to be hypodermically injected for the relief of pain, then ergotine has to be administered in the same way during labour, and after that some other remedy must be introduced into another patient. At one time the syringe is charged with perchloride of iron for the treatment of nævus, and at another time it is used for injecting iodine into an indurated thyroid or other glandular enlargement. By the general use of a single instrument much extra labour and additional responsibility are always incurred. The same syringe when continually employed for a large number of potent medicines demands at the hands of the busy practitioner of the healing art the most scrupulous care in washing and cleaning after every operation. Of course this difficulty is readily overcome by obtaining a set of instruments, and by using a special syringe for every patient and for every remedy; but this alternative involves considerable outlay, and certainly renders the administration of hypodermic remedies an expensive form of treatment, and quite beyond the reach of a large class of patients. The syringe always requires care in its application: the eye must generally assist the hand, and the quantity of fluid injected must be regulated by the movement of the piston over an index. The piston is often furnished with a movable stop, and this is no doubt a valuable safeguard. Still it must be remembered that every addition involves extra attention, and that the stop itself has to be properly adjusted before every operation. The hypodermic injection of an active medicine and the due regulation of the dose always involve considerable responsibility, and for this reason it is never my practice to place the administration of any remedy by the syringe in the hands of attendants or friends.

The little instrument which is accurately represented in the figure is intended as a substitute for the hypodermic syringe, and I venture to hope that many of my professional brethren will find it a simple and economical contrivance, and well adapted for every medical and surgical purpose in which such an instrument is essential. The injector consists of two parts: an elastic measuring ball and an injecting needle; the latter is provided with a boss, which serves for a handle during its introduction. It is conveniently furnished with a joint, so that the same needle may be adjusted on several measuring balls. The prefix "safety" is employed to indicate the important fact that its simple construction affords a valuable safeguard against accident, and that it renders an overdose practically impossible. The measuring balls are made in different sizes, and each ball is capable of holding only a definite amount of fluid, the quantity varying from one to twenty minims. The number placed on the exterior of each ball expresses its capacity, so that by selecting an injector the exact dose can be at once administered.

The instrument can be instantly charged by compressing the elastic ball and inserting the point of the needle or the open end of the joint into the fluid to be injected, and it is generally advisable to repeat this little operation two or three times to ensure the complete expulsion of air. It can be discharged slowly or rapidly under the skin, and this is of course regulated by the pressure of the thumb and finger. It can be washed out and cleaned in a moment, and it is no trouble to keep in order for any emergency. It cannot be broken by an accidental fall, which is too often the fate of the hypodermic syringe, and when it is worn out, it may be

very easily replaced. The injector can be used if necessary under the bedclothes, and as a mistake in the dose is impossible, the performance of the operation does not require the guidance of the eye. It has still another important quality, which cannot fail to increase its utility—the cost is so moderate that a separate instrument can be used for every remedy as well as for every patient.

In conclusion, the safety hypodermic injector will serve many important surgical purposes, and it is a perfect substitute for the syringe in the treatment by injection of nævi and other tumours. It is made for me by Messrs. Mayer and Meltzer, 71, Great Portland-street, and can be obtained from that firm in the form of a single instrument, or in a little case containing several injectors of various sizes. The surgical needle is furnished with three openings at the point to facilitate the escape of fluid into the tissues.

Portsmouth.

FATAL CASE OF LARYNGISMUS STRIDULUS.

BY JOHN McMUNN, L.R.C.P. ED., L.R.C.S.I.,
LATE DEMONSTRATOR OF ANATOMY, CARMICHAEL COLLEGE, DUBLIN.

ON May 5th, 1882, a woman sought advice for her little daughter, aged one year and nine months. The general health of the patient was good, but at certain times she lost her breath and had to struggle hard to regain it. There were three previous children, all of whom had died in infancy. The duration of disease in the present instance was three weeks; such was the mother's story. The child looked healthy, voice and respiration were normal; the lower gum was swollen and tense over the sites of the temporary molars. Finding here a probable exciting cause of what I believed to be laryngismus stridulus, I determined to lance the gums. As the knife grated on the subjacent tooth the child commenced to cry violently, but at the expiration of one long loud cry it became silent. Breathing was suspended. After the lapse of a couple of seconds a struggle for breath ensued, the face assumed a frightened look, the mouth was widely opened, the trunk and limbs were stiffened, the toes and fingers worked, while the inspiratory muscles were thrown into violent contraction, and signs of asphyxia rapidly developed; the face grew livid, drops of sweat stood on the forehead, the pulse grew feeble and small, while with widely dilated pupils the inturned and suffused eyeballs seemed to

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start from their orbits. Violent inspiratory efforts culminated in general convulsions. Soon all was still, the pulse vanished from the wrist, impulse and sound ceased over the heart, and general muscular reaction took the place of contraction.

Treatment.—The child was shaken, its face mopped with a wet handkerchief, its back and stomach slapped with the wet hand, attempts to excite vomiting were made, the tongue was drawn forwards, and the vapour of chloroform blown down the throat from the palm of the hand, when muscular relaxation took place; artificial respiration was carried out for some time, while endeavours were made to excite anew the heart's action. Tracheotomy was proposed early, but no reasonings would induce the mother to give her consent.

Remarks.—The tongue of a child is fitted to the arch of the palate; it breathes through its nose; in crying the tongue is flattened, depressed, and drawn backwards. Laryngeal obstruction took place after a violent expiration, or at the commencement of an inspiration. Sudden falling of the epiglottis would be thus easily induced, this would induce spasm in the irritable muscles which guard the entrance of the windpipe, while further inspiratory efforts would tend to perpetuate obstruction, especially in the yielding larynx of a child.

Park-lane-terrace, W.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI: *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

ST. BARTHOLOMEW'S HOSPITAL.

THREE CASES OF ACUTE RHEUMATISM COMPLICATED WITH PERICARDITIS AND PLEURO-PNEUMONIA; REMARKS.

(Under the care of Dr. SOUTHEY.)

THE following notes and remarks illustrate the supervention of some grave complications in acute rheumatism:—

CASE 1.—Letitia T——, aged sixteen, a machinist, single, an anæmic strumous-looking girl, was admitted on Oct. 5th with rheumatism and pericarditis, having been laid up at home with articular rheumatism since September 28th (eight days). This was the first attack of rheumatism she had had, and with the exception of scarlet fever and whooping cough she had never been laid up before.

Condition on admission.—Perspiring profusely; temperature 102·6°. Decubitus dorsal; no pain in chest, no cough; she lay very still quite low in bed; mind clear. Tongue white and furred; breath foul; bowels costive. Micturition natural, urine high coloured, otherwise normal. Catamenia just ceased, always regular. Heart apex beat in the fifth interspace below the nipple. Thrill felt with systole, and friction rub heard all over the cardiac region. Pulse 144, soft. Lungs presented no abnormal sounds or dulness. Respiratory sounds clear; respiration 90. Abdomen natural. Large joints, as shoulders, hips, and knees, were more affected than the small ones.

Treatment by twenty grains of salicylate of soda, and seven drops of tincture of opium every four hours. The temperature fell the following morning to 98·6°, and only rose to 100·2° on that and the next day. Her pains promptly subsided. There was no anxiety; no restlessness. On the thirteenth day of the rheumatism the temperature fell to normal and remained so for three days, but the friction rub became less distinct, and the præcordial dulness increased. She was very drowsy, but woke up to take her nourishment. The opiate was now diminished, and the salicylate given less frequently. There was effusion enough to produce marked præcordial dulness on the twelfth day of illness, and contemporaneously, or nearly so, bronchial breathing and bronchophony were noticed at the root of the right lung, and over more than two-thirds of the left lung. The dorsal position was maintained. Temperature 102·6°; pulse 120. Symptoms of more active implication of the left pleura were noticed on the nineteenth and twentieth days of the illness. Pain stitchlike and friction rub. At the same date the dislocation of the heart's apex upwards and outwards, and its disappearance from the chest-wall, too, were well marked. The heart's impulse being felt on the level of the mammæ, she was advised to make some effort herself to lie on both sides alternately, and was directed to be propped by pillows into such position. Slight ægophony was noticed over the area of bronchial breathing.

Treatment.—Twenty grains of salicylate of soda, and five drops of tincture of opium, every four hours, were repeated. Her temperature fell gradually from the nineteenth day of illness, and her pulse improved. She has been able to sit up in bed and do needlework. Since the twenty-fourth day her pulse has been from 74 to 84; respiration 24; and temperature below normal. Heart-sounds have been clear, and no friction sound has been heard over front of chest. She has had no fever and no cough, but there is still a friction sound synchronous with respiration behind over left lung, some dulness and evidence of feeble air entry at base of lower third of left lung. She entered upon convalescence on the twenty-fourth day of her illness.

The facts in evidence of the course of this patient's disease are:—Pericarditis; pericardial effusion; imperfect air entry into lower lobe of left lung. Bronchial breathing; no rusty expectoration, followed by lateral and posterior friction rub and slight ægophony; rheumatic pleuro-pneumonia, with slight pleuritic effusion. Her temperature fell from 102·6° to 99·4° on the ninth day of her illness, pericarditis notwithstanding, and it was not till ten days later that it rose at all high again, 100·6° and 101°, when she had some fever from her left pleuro-pneumonia. This febrile disturbance lasted four days, and she has since convalesced with one slight relapse.

CASE 2.—Eliza P——, aged forty-six, and fairly nourished, prematurely grey-haired woman, single, entered on her menopause at the age of forty-one. She had small-pox at nine years old, and her first attack of rheumatism at nineteen, which laid her up for some weeks; second attack at the age of forty-five, during which she was laid up six weeks. The present illness began three weeks before her admission by swelling and pain in her left foot, which shifted to her shoulders, calves, knees, and lastly wrists. She was feverish, had no appetite, and the pain made her feel sick.

Condition on admission.—Sept. 9th: Lying flat on her back, unable to help herself; all the joints of her arms stiff and painful; both wrists swollen; the right red and very tender. Knees and right hip-joint very painful; ankles swollen, red, and hot to feel. Pulse 108; respiration 18; temperature 100° to 101°. Bowels open four times freely; tongue coated with usual thick white fur, and inclined to dry; urine high-coloured; skin moist; pupils large.

Physical examination.—Fauces and abdomen yielded negative signs: heart impulse feeble, apex-beat indistinguishable, systolic apex murmur; præcordial dulness increased over both lungs before and behind; rhonchus and catarrhal sounds, but resonance unimpaired. She was placed on the usual slop dietary, and treatment by salicylate of soda was pushed to salicylism, an event established in twenty-four hours.

Course and progress.—Three days later her pains were gone; but she complained much of her head, and her cough was troublesome. She took her nourishment fairly, but slept very little. Pulse 78, small and weak; respiration 20. Good resonance over lungs, front and back, and fewer moist sounds. Joints still swollen, and painful upon least movement. General condition extreme weakness; lies always in the same posture. After she had been under treatment twelve days, and therefore on about the thirty-third of her illness, we noticed that her pulse had risen to 96, respiration to 36, and temperature, which had gradually fallen to below normal, rose to 100·5°. Her cough was more troublesome, and she had a relapse of pains. Pericardial friction was now audible all over the cardiac region in front, and the dulness increasing. The following day the effusion was obviously increased and her temperature went up to 104°, but no physical signs as yet of pressure upon the lungs were observed. The relapse of pains lasted for the usual three days; improved on the fourth, when she slept well without any opiate. But we observed marked dulness on percussion on this the thirty-seventh day of her illness at the base of the left lung. Pericardial friction and præcordial dulness still well marked in front. Since her pericarditis had been ascertained beyond

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doubt she had taken repeated moderate doses of morphia, and was propped up in bed. The following day fine pneumonic crepitation could be heard over the dull area of her left lung, with bronchial breathing, transmitted also to the right lung. The colour of the sputum was distinctly rusty. Meantime, notwithstanding the pneumonic complication, the temperature fell to nearly normal. Three days later both legs were anasarcous, and pitted widely. Stimulants had been given, but were now increased. Two days later improvement commenced, and gradually the dulness receded, and more air entered the affected lung; but her cough, she said, "tore her to pieces." Pulse 96; respiration 42. Her improvement steadily went on; the cough subsided, and she was free from all pain on the forty-eighth day, on which she was able to wash herself.

On the fiftieth day the pericardial friction gradually disappeared, but a pleural rub remained at the left base, and in the left lower lateral region for some days longer. She got up for a short time a few days ago, the sixty-sixth day of her disease.

In this case again there was pleuro-pneumonia of the middle or lower portion of the left lung occurring shortly after the evidence of a considerable pericardial effusion has been established. Yet it ran a favourable—nay, more, a speedy—course to entire resolution, so that in a fortnight or three weeks afterwards the woman was convalescent.

CASE 3.—Emma W——, aged nine, a poorly nourished strumous child, with dark hair and pasty anæmic look, was admitted into Faith ward on October 3rd, suffering with acute articular rheumatism and pains in her chest. Her illness had lasted a week, and the pains and swelling had begun in her right hand.

Condition on admission.—Temperature 102·6°; skin hot and moist; cervical glands enlarged. Tongue moist, but furred; abdomen *nil;* bowels confined; urine scanty. Chief seat of pain and rheumatic inflammation in left hip-joint. Pulse 112; respiration 33.

Physical examination.—Heart's apex in fifth interspace outside the left nipple, systolic murmur at apex; pericardial friction at base; præcordial dulness scarcely increased abnormally. Lungs: no morbid sounds, but enfeebled vesicular sounds, and slight dulness at both bases behind, and, laterally, over the right. She was treated with salicylate, and for four days went on remarkably well; her temperature fell to below normal, and pericarditis and endocarditis notwithstanding, she had four days' intermission of her fever; but then her temperature gradually rose, in forty-eight hours, from 97° to 100·6°; pulse 108. The pain in her heart region was greatly increased, and the præcordial dulness increased also, showing no inconsiderable pericardial effusion, extending all across the chest in front, and well up into the left axilla. She had to be propped up in bed to get her breath, and we recognised dulness, with bronchial breathing, all over the middle portion of the left lung; posteriorly in scapular, interscapular, and subscapular region, also across the root of the right lung. The cardiac region was painted with iodine and poulticed, and some morphia was given in small doses, $\frac{1}{12}$th of a grain every four hours. For four days she was extremely ill, then suddenly began to improve. Her temperature fell to 99°; her skin acted, and her pulse was 108; tongue moist and clearing. Dulness on percussion; bronchial breathing, and bronchophony still marked the area of the left lung consolidation; but there was no redux crepitation, and no expectoration, and very little cough.

Again the mode of recovery was in the order which I have exactly observed—namely, that as the præcordial dulness diminished and the effusion was reabsorbed, so the lung consolidation lessened, and air re-entered it, with here and there a little bronchial crepitation; on the twenty-eighth day of her illness, having had no further elevation of temperature or increase of rheumatic pains, sleeping and eating well, the pericardial friction rub became re-established all over the chest in front. Breathing sounds were faintly heard over the area of previous lung consolidation, and she steadily convalesced. Yesterday, however, and for the last week, we have been able to recognise a distinct pleuritic friction sound over the left lung base.

Remarks by Dr. SOUTHEY.—I have taken three cases of pericarditis that had well-marked pericardial effusion; no rare, no exceptional cases, but all illustrating a rule so invariable in my experience that I have often wondered it should have escaped comment—the association of pericardial effusion with pneumonia of the lower lobe of the left lung, or with pneumonia of the middle symmetrical portions of both lungs. In slight pericardial effusion this complication is not met with; in large effusion it is invariable. The left lung is that which is always first and most involved. Is it an effect of pressure? Is it a consequence of dorsal decubitus? Is it a result of the filling up of the posterior mediastinum and that complemental space into which the lung ought to be expanded in the inspiratory augmentation of the thoracic chamber? I believe the latter explanation is the correct one, because the order of physical signs is so very regular. Increased præcordial dulness in front, absence of respiratory sound first between the lower angle of the left scapula and the spine, then dulness on percussion over the same area. The affair terminates in some cases with nothing more than inexpansion of the lung; there is superadded no bronchial breathing, while in others bronchial breathing is well marked. And in some of these, again, the morbid process advances no further; effusion into air cells and solidification of lung tissue are all; a little friction rub follows, but no rusty expectoration, no attendant bronchitis, no fine or redux crepitation; while a third degree of the same lung disease may occur, as in E. P.'s case, attended by both rusty expectoration and fine crepitation and redux crepitation, in other cases where the pericardial effusion is of longer duration or slower absorption. I do not remember to have ever found this pneumonic rheumatic complication independently of pericardial effusion, although I have seen repeated examples of slight superficial rheumatic pericarditis which were not thus complicated. This rheumatic pneumonia has a far more favourable prognosis than either its extent or occasional doubleness would at first thought entitle it to. If my theory of its causation be correct, the treatment I adopted in the three cases I have brought before you, and which experience has taught me is good, is also rational—viz., subduing the joint pains by opium, so that the patient may be moved into a less dorsal position; propping up of the patient by pillows; and administration of stimulants. Rheumatic pericarditis and rheumatic pneumonia, or pleuro-pneumonia are doubtless attended seldom nowadays by a fatal issue, but when bleeding and mercury were principally relied upon for conducting these local inflammations to resolution, and even in the time when alkalies were chiefly trusted to in the treatment of rheumatism, death was far from being uncommon. That the lesser mortality of rheumatism of late years may be due to some alteration in type of the disease I am not prepared to dispute. It may be so, but how can we prove it, and to what are we to refer such an alteration? To better living, better clothing, less wet weather, better draining of our lands, and the more hygienic housing of our population? This may be the case, but I see no evidence of it. But as a hospital physician I avow that we admit no fewer cases of acute rheumatism than formerly; nor comparing the cases I see to-day with those I saw twenty years ago can I perceive any difference in the severity of the general symptoms, or in the degree or kind of its ordinary complication. Still I certainly fail to witness so many autopsies upon cases of rheumatism, and have fewer butter-pat pericardial effusions and solidified lungs, with lymph-coated surfaces, to show my clinical clerks. The cases complicated by pericarditis are less noisy, less restless, less wild in their delirium, often scarcely delirious at all throughout their course. To what shall we attribute this? Is it to salicin, to the salicylates, or to a generally more rational treatment of the disease? I believe it is that we are biased by less theory in our conduct of each individual case, that we do not aim at neutralising some possible lactic acid, destroying some ferment, or even ousting some poison. We neither purge, nor sweat, nor diuretise, nor nourish our patients so much, nor use an exclusive milk, or alcohol, or broth dietary. We seek, at least I can speak for myself, to ease pain by local sedative applications, and rest overstrained nerves by opiates. We wait till stomach catarrh subsides, and then give peptonised or part-digested meats. For three or four days together, we have learnt, patients can live very well on toast-and-water, and if their tongues are very thickly furred will seldom take much else than warm tea or clear meat soups. A little weak brandy-and-water is often a much more suitable nutriment than a pint of milk, although this is thought and believed to be the simplest, the most entire, and the most suitable of aliments. *Pace* my total abstainer; alcohol is physic. In the treatment of acute rheumatism this gastric catarrh is no unimportant affair; and I believe that the real use of salicylate of soda lies in the good effect it appears to exercise upon the

stomach. The tongue cleans rapidly under the repeated doses of the remedy. There is another remedy which seems to be adapted to the later stages of the malady, to the relapsing cases—the cases, too, which perspire very profusely—this is salicin, which some of you have recently seen me prescribe pretty largely. I give ten grains with one grain of the iodide of potassium and ten drops of the tincture of iodide to an adult every four hours. And this remedy doubtless exercises what virtue it possesses upon the gastro-intestinal functions, for the appetite and digestion improve under its use.

SEAMEN'S HOSPITAL, GREENWICH.

TRANSIENT RIGHT HEMIPLEGIA FROM INJURY TO THE HEAD.

(Under the care of Mr. G. R. TURNER.)

FOR the following notes we are indebted to Mr. E. PENNY, house-physician:—

Maude M——, aged two years, was brought to the hospital on August 7th, 1882, at 8.30 P.M., with the following history:—At 5 P.M. on the same day she fell off the table, striking the left side of the head with some violence as she fell. She did not complain of feeling any uneasiness until 6 P.M., when she became steadily but rapidly unconscious. Soon afterwards she was seized with convulsive movements of her right arm, right leg, and right side of the face. These occurred every few seconds. When brought to the hospital she had been in this condition an hour and a half.

On admission she was quite unconscious, and could not be roused in any way. Every few seconds she was seized with violent convulsive movements of the right arm, the right leg, and the right side of the face. Both pupils were dilated and insensible to light, but the right was larger than the left. Both eyes were turned to the left side, but the head was quite natural. Her pulse was 60, and very good; respiration 29, deep, but no difficulty about it; temperature 100° F. There had been no vomiting. Her head was examined, and a swelling found over the anterior and inferior part of the left parietal bone, but there was no evidence of any fracture. She was put to bed and an ice bag applied about 10 P.M.; the right arm and leg ceased their convulsive movements, and in the course of a few minutes were completely paralysed, and the side of the face dropped. Her urine was passed in bed from time to time. Her temperature was now 98·4°; pulse and breathing unchanged. About 1 A.M. she was noticed to move both right arm and leg, and from this time the paralysis gradually passed off, the face resuming its normal look last of all, and the leg recovering first. At 8 o'clock in the morning she vomited freely, and almost immediately afterwards she recognised her mother. From this time she rapidly recovered, and left the hospital quite well in four days.

STROUD GENERAL HOSPITAL.

OVARIOTOMY DURING PREGNANCY; SUBSEQUENT NORMAL PARTURITION.

(Under the care of Mr. STORRY.)

FOR the following notes we are indebted to Mr. R. D. Cameron, resident medical officer:—

Emily B——, aged thirty, married, four children, was admitted on April 1st, 1882, with an ovarian tumour, the swelling of which she noticed eighteen months ago. She last menstruated in January, 1882. Being incapacitated from following her household duties, and having lately suffered considerable pain in her abdomen, on the 11th of April (believing her to be pregnant), she was placed under the influence of ether. Mr. Storry, with the assistance of his colleagues, and with the ordinary carbolic spray, opened the abdomen, torsioned one vessel in the abdominal walls, but found no adhesions. He then tapped one large cyst and one small one, tied the pedicle with chromicised catgut, and removed the growth. The uterus was found to be enlarged in the pelvis. The wound was brought together with chromicised catgut sutures. An india-rubber drainage-tube was left hanging from the lower part of the wound, and communicating at the other end with the abdominal cavity, and the usual gauze dressing and india-rubber bandage were applied. Eight hours after the operation two drachms of blood-clot were removed with a syringe from the drainage-tube. The tube itself was removed on the fourth day. The temperature in the axillæ was taken every two hours for the first week and it never rose above 99°.

The patient was catheterised every six hours for the first week. The bowels were opened by an enema on the eighth day after the operation. On the fourteenth day she was sitting in an arm-chair, and a fortnight after this she returned home to her friends.

On Oct. 18th Mr. Storry delivered her of a fine female child.

Medical Societies.

MEDICAL SOCIETY OF LONDON.

Case of Intra-thoracic Aneurism.—Treatment of Pleural Effusion.

A MEETING of this Society was held on the 20th ult., Mr. F. Mason, President, in the chair.

Dr. HAWARD showed a man suffering from Intra-thoracic Aneurism. The case was that of a carpenter, thirty-eight years of age, who had suffered from what was taken to be left pleurisy in February, 1882, and had been unable to work since. In June last he began to have throbbing in the chest, and came into the hospital six weeks ago. The cardiac sounds were normal at the apex; but in the second left interspace, half an inch outside the sternum, there was a rough blowing bruit blending with the first sound. There was no bulging or thrill, but a faintly visible impulse. "Each expiration is broken by a series of audible puffs, like the distant snorting of a goods engine. These correspond to the cardiac contractions, and are slightly anterior to the radial pulsation. They are increased in loudness by exertion, and are even felt, as well as heard, by the patient; but after prolonged rest in bed they disappear altogether, returning directly he rises." There was a small bronchocele. In reply to questions put by Drs. Habershon, Hall, and Cavafy, Dr. Haward said that the thyroid enlargement had not increased; he was not aware whether the sound was modified by sleep or repose, and thought the disease to be in an early stage; no laryngoscopic examination was made. The case was referred to a committee consisting of Drs. C. T. Williams, de H. Hall, Thorowgood, and Cavafy, and the author.

Dr. FREDERICK HICKS drew attention to an improved form of Apparatus for Paracentesis Thoracis. The advantages were:—1st. That it enabled any degree of pressure, high or low, to be used and maintained during the operation. 2nd. That a manometer, for ascertaining the intra-thoracic pressure either at the commencement or during the operation, could be employed easily and without encumbering the apparatus. Two forms of manometer were shown, and their action explained and demonstrated; in one the fluid was mercury, in the other coloured water. In the latter the disarrangement of the apparatus by the oscillatings of pressure during coughing were divided by a mercurial valve, so constructed as to allow a slow current of air at any pressure to pass freely and affect the water-gauge only, whilst any sudden gust of air acted on the column of mercury, and in doing so closed the tube connecting the trocar with the manometer. The construction of this apparatus was explained, and model shown. The use of the manometer was recommended in all cases of paracentesis thoracis. The intra-thoracic pressure was not proportionate to the amount of fluid present. In many cases the fluid was under slight or even no pressure, and in some there was actually suction which might amount to half an inch of mercury. Without a knowledge of this condition it was impossible to estimate the force required to withdraw, which if too low rendered the withdrawal less complete, and increased the liability to the sucking-in of air on the patient coughing or taking a deep inspiration, which, if it were too high, blood was easily expressed, especially so in tapping recent effusions. The same apparatus was also adapted for washing out fluid contained in cavities by alternately injecting from one bottle and drawing into another. This was done through the trocar by means of a three-way stopcock, and the opening or closing of the apparatus was unnecessary during the operation. It was important to prevent the accidental introduction of air into the pleura during the various arrangements and manipulations. An instrument was shown for exploring, and if necessary introducing a drainage-tube into cavities in the lungs resulting from phthisis or bronchiectasis, or introducing a drainage-tube into the pleura in cases of empyema when an anæsthetic is

not given, but only the skin frozen, and rapidity in operation became a matter of importance.

Dr. THOROWGOOD made some remarks on the Treatment of Intra-pleural Effusions. He commenced by pointing out that the operation of tapping the chest for the evacuation of collections of fluid, though old as the days of Hippocrates, had only of late years taken its position as a recognised and successful mode of dealing with such effusions. Before the days of Laennec the difficulty in diagnosis caused the postponement of such operative measures until the chest bulged or an abscess pointed. Then it was thought justifiable to puncture, but it was common for the enfeebled patient to sink from exhaustion before very long. In his own experience rapid evacuation by the aspirator was almost always followed by speedy reaccumulation, and it was hence his practice to wait three weeks generally in a case of obvious intra-thoracic effusion before aspirating. Brief details of cases were given where pretty copious effusion had become absorbed satisfactorily under small doses of mercury, combined with diuretic mixtures. When aspiration became necessary stress was laid on very gradual evacuation of the fluid under a low suction power. In cases of empyema, as a general rule, the open method of continuous drainage succeeded best, but the details of one case were given where an empyema was treated by two aspirations with a perfectly successful result. The first time pure pus was drawn out, at the second operation, twelve months later, a blood-stained fluid appeared, after which steady and complete recovery followed. As a rule, there should not be so long an interval between the tappings, but if pus appear once in the aspirator, and a week or two later the chest seem to have again filled, no time should be lost in again emptying it, so that the lung may have a chance to expand. A case seen with Mr. Bullock, of Isleworth, proved the expediency of this course. A youth had an empyema on the right side, which was evacuated by aspiration. In eight days' time the pus again collected and was let out by free incision, and a drainage-tube was inserted, the operation being done antiseptically. In two months' time recovery was complete, the lung filled well, and there was no deformity. Washing out the chest was only required when the discharge was offensive, the great point being to secure free drainage. Dr. Thorowgood drew attention to right hydrothorax being sometimes caused by cirrhosis of the liver, and the details of a well-marked case were given.—Dr. GREEN pointed out the different objects with which paracentesis was performed in a case of serous and in one of purulent effusion. In the former it was only needful to remove the intra-thoracic pressure, and for this he preferred Dr. Hicks' method. The cases marked by the greatest amount of effusion were those that were most insidious in onset and least attended by pyrexia. In such cases he did not anticipate much benefit from drugs, but advocated early operation.—Dr. C. T. WILLIAMS thought that in very early stages drugs were of service. So far as his own experience went, the cases treated by aspiration did better than the others. The occurrence of pain in the side was an indication for ceasing to withdraw fluid, the remainder being always absorbed. He mentioned a case in which paracentesis was refused, and where treatment by drugs took a year to accomplish the cure. He had not seen much success from division of ribs or cartilage.—Dr. HALL remarked on the importance of a counter-opening in the lowest part of the chest in empyema, to efficiently drain the cavity.—Dr. SYMES THOMPSON thought in sero-purulent cases it was important to empty the pleural sac completely. In such cases Dr. Hicks' apparatus for the introduction of air was useful.—Dr. HICKS said he strongly advocated the use of the least possible amount of suction in treating pleural effusions, the aspirator being used only as a safeguard in case the tube became blocked. The danger of making an opening very low down was that it might get blocked by the diaphragm. —Dr. THOROWGOOD thought that in serous effusion the use or not of the aspirator was of minor importance.

MEDICAL OFFICERS OF HEALTH SOCIETY.

AT a meeting of this Society, held at Adam-street, Adelphi, on November 17th, the President, Dr. J. W. Tripe, in the chair, a paper was read by Mr. ROGERS FIELD, M.I.C.E., on "Certain less recognised, but highly important, points in the Drainage and Ventilation of Houses," of which the following is an abstract:—Three sanitary principles govern house-drainage. These are: 1. All refuse matter must be completely and rapidly removed from the house 2. There must never be any passage of air from the drains or waste-pipes into the house. 3. There must be no connexion between the drains and the domestic water-supply. These principles, although so simple, are very frequently neglected. The first goes absolutely to the root of sanitation; for were it strictly complied with there would be no leaky drains, no polluted subsoil, and no production of foul gases in the drains from decomposing organic matter. There cannot be a greater mistake than to assume, as is commonly done in investigating drainage, that if water runs away with freedom this is all that is required; numerous cases are on record where the sewage from houses has apparently run away freely for years, but where the greater portion of it has really been leaking out of the drains into the ground under or close to the house. In illustration of this point the author quoted two cases in his own practice: one in which the connexion with the sewer was actually found to be blocked with shavings, which had been left in when the house was built three years before; the other that of a school, in which the drainage from the lavatories had leaked through disused drains under the floor of a large portion of the building, and where, although there was a mass of filth in some places seven feet deep, no leakage had been suspected. If the drains are exposed and found clean and jointed with cement, this is not sufficient; the tops of the joints may be good and the bottoms bad. The only safe method is to actually test the drains by plugging them at the lower end and filling them with water; very few house drains indeed stand this test. Even if the drains are outside the house, it is a mistake to assume that it is unimportant whether they are sound; for not only may sewage leak out of faulty joints and percolate under the house, but foul air may be drawn into the house. It is important to realise how small an amount of deposit will create mischief by decomposing and degenerating foul gases, a mere irregularity of the joints even when the drain has a good fall is sufficient to cause this. There is no better test of the condition of the drains than the amount of smell emitted from a ventilating opening, for if drains be properly laid and in thorough working order, practically no smell should exist. Examples were given. Faulty forms of traps and water-closet apparatus were strongly condemned by the author, and diagrams descriptive of good and bad closets were exhibited. The principle that there should never be any passage of air from the drains or waste-pipes into the house was then considered, and the means of isolating the house drains from the public sewer, the necessity of keeping the drains outside the house, their ventilation as well as that of the soil-pipes, the position of the waterclosets, the disconnexion of the sanitary fittings inside the house from the drains, were referred to. It was insisted that the danger should be guarded against of trusting too much to those parts of the drainage of a house which are visible as an index of the condition of other and important parts which are concealed, and an instance was mentioned of a house the drainage of which had been recently reconstructed, and where all the sanitary arrangements appeared at first sight to be perfect, but where a subsequent examination of the drains, which were under the house, showed that the joints were in many places defective, and at one point the pipes were not jointed at all, but a space left large enough to put a hand in, though it was stated that special care had been taken to make the drains watertight. Old drains, which had no outlet connected with gullies, were found beneath the passages and rooms; the housemaid nearly died of typhoid fever, and beneath the room she occupied was found an old drain with a large amount of foul deposit. A long list of other defects was described, leading to the conclusion that the drainage instead of being very good was really so radically defective throughout that it was necessary to reconstruct the whole of it. Another instance was given in which a lady and her cook were attacked with erysipelas and blood-poisoning shortly after occupying a house. Various alterations were made in the drainage in the absence of the family, but on their return the lady was again attacked with erysipelas, and shortly after other members of the household. Again alterations were made, and again the lady was attacked with erysipelas, and the housemaid with typhoid fever. An examination of the house by the author showed that an old stoneware drain in the scullery into which the sink formerly discharged, before it was disconnected, had not been removed, and

though stopped with cement, the stopping was imperfect, thus allowing the air of the drain to enter the house. The author next considered the various ways in which foul air from faulty drainage inside the house passes to different parts, and pointed out the opportunities which were given for the passage of air from one part of a house to another, depending chiefly upon windows and fires; the latter, of course, mainly acting by drawing air through passages, staircases, and doors. But other channels must also be borne in mind; and an interesting account was given of the passage of foul air along bell-wire tubes, the proximity of the bell-pull to the fireplace giving an increased opportunity for air to be drawn from a distance to this part of a room. Channels for gas-pipes and for hot-water pipes also not uncommonly give facility for the admission of foul air. In connexion with this part of the subject, a remarkable instance was given of a particular bed in a school, the occupants of which were constantly the subjects of alight attacks of pneumonia, with tendency to typhoid. In this case the foul air was conducted from a lavatory, where there was defective drainage up a staircase, and, impinging on the ceiling of the dormitory, was reflected on to the bed where the sickness occurred. An interesting account was given of the cause of the Duchess of Connaught's recent illness. Defective drainage was found in the basement of the house; and after numerous experiments, the means by which the foul air entered the duchess's bedroom were discovered. These showed that it was only when occupying certain positions in the room that she would be exposed to the influence of the foul air, while in bed she would escape. As a matter of fact, in twenty-four hours after sitting on a sofa in one of these exposed positions Her Royal Highness's symptoms fully developed themselves. These two cases were illustrated by diagrams. The necessity of a thorough disconnexion between the drains and the domestic water-supply was then dwelt upon, and the mistakes most commonly made in this particular pointed out.—In the discussion which followed the President, Dr. Buchanan, Dr. de Chaumont, Dr. Corfield, Mr. E. C. Robins, Dr. Bate, Mr. Jacob, Dr. Rogers, Dr. Poore, and Mr. Shirley Murphy took part.

CAMBRIDGE MEDICAL SOCIETY.

AT the meeting on November 3rd (Professor Humphry in the chair) the subject for discussion was "Sudden Death (irrespective of Hæmorrhage) during Confinement, or within three weeks after—the Causes, &c."

In answer to a circular requesting members to inform the President whether they had seen any cases, and if so to give the particulars, thirty-five replies were received. A total of twenty-nine cases were supplied by fifteen persons; twenty-one members had not seen a case. Professor HUMPHRY had made an analysis, and divided the cases into three classes—viz., of sudden death (1) before the birth of the child; (2) soon after delivery; (3) within three weeks after confinement. Under the first heading five cases were reported, in two of which death was apparently due to exhaustion from long and complicated labour. Fifteen cases were reported under the second heading: in two the cause of death was not apparent; in three the labour was tedious and severe; two were cases of inverted uterus; one case was marked by diabetic coma and one by albuminuria; three were cases of placenta prævia; in one case rupture of the uterus occurred; and in one parturition supervened during an attack of typhus. Under the third heading eleven cases were returned: nine of the deaths were attributed to embolism; in one case there was albuminuria, and in another apoplexy.

Dr. STOWERS (of London) exhibited a male patient, aged twenty-eight years, who had been under his care eight months suffering from Acne varioliformis. The disease first appeared on the skin in front of each ear, and had throughout been almost entirely limited to the face, scalp, and upper part of chest. Deep punched-out scars, or pocks, marked the sites of the pustules, so that the deformity remaining was equal and similar to that of confluent small-pox. Several unsuccessful attempts at inoculation were made to test the character of the pus. The patient recovered entirely under the influence of increasing doses of arsenic, aided by the topical application, by puncture, of carbolised oil, thus supporting the belief previously held by Dr. Stowers that the affection was in no way related to syphilis.

Reviews and Notices of Books.

Quain's Elements of Anatomy. Edited by Dr. ALLEN THOMSON and Professors SCHAEFER and THANE. Ninth Edition. London: Longmans, Green, and Co. 1882.

THE name of Quain has long disappeared from the list of editors of this work, and now that of Sharpey is also missing. The late Professor Sharpey had been so long and honourably associated with the production of its successive editions; his writing and supervision conferring on the chapters on the general anatomy of the tissues and the anatomy of the viscera their especial charm of style, their marvellous accuracy, and progressive development in accordance with whatever has been new and at the same time true in modern research, that it is hard to realise the issue of an edition without his name on the title-page. But, alas! he has passed from amongst us, and we are reminded by a simple preface of the great debt which anatomical and physiological science in England owes to his writings and example: "This ninth edition of 'Quain's Elements of Anatomy' is dedicated to the memory of William Sharpey, M.D., LL.D., F.R.S., formerly Professor of Anatomy and Physiology in University College, London, and during thirty-five years one of the editors of the work." The chief responsibility of the revision has therefore devolved on Dr. Allen Thomson, who now for the third time appears as editor, in association with Professor Schäfer, who was responsible for most of the histological portion of the preceding edition, and Professor Thane, to whom has now been allotted that part of the subject which deals more especially with descriptive anatomy. We congratulate Professor Thane on his succession to so honourable a distinction, and we consider the choice an admirable one, having regard both to Professor Thane's extensive and accurate anatomical knowledge, and to the fact that to his predecessors in the Chair of Anatomy at University College the work itself owes its origin, its special features, and many of its most marked improvements.

The first volume of the new edition contains the descriptive anatomy of the bones, joints, muscles, vessels and nerves, and a special chapter on superficial and topographical anatomy, whilst the second volume is devoted to general histology, the anatomy of the viscera, and embryology. The chief alteration in the text of the descriptive anatomy is in the chapter on the bones of the head, to which a short but very clear account of the methods of modern craniometry, with examples of the varieties of the skull in some typical races, has been added. As minor changes we find the position of the liver in the living subject described according to His, the classification of the cranial nerves according to Soemmering, and the divisions of the mediastinum mainly in accordance with the views of Struthers. The superior division of the mediastinum is introduced, and its boundaries and contents are for the first time laid down in a text-book. We much prefer the divisions of the pleural interspace which were suggested by Professor Wood in his article on "The Arch of the Aorta," in the *Journal of Anatomy and Physiology* for 1868, to those of either Professor Struthers or the editor, and it is in that article that the great importance of a more accurate division is first referred to, and the "superior mediastinum" as a distinct region named and defined. The laborious and careful investigations of Wood on the true position of the aorta and the thoracic contents, which have only been introduced into the last two editions of "Quain's Anatomy," demand far more notice than the general description given by Struthers. Even the very term "superior mediastinum" is used by Wood. The sections on the bones, joints, muscles, and nerves show marks of careful revision, and those on the vessels are now much improved by coloured drawings. We could wish that some of the illustrations of

the bones, especially those of the skull, and even of the more important nerves, had been replaced by new and larger woodcuts, for when the details are so very numerous, any representation which is overcrowded with reference-numbers is of but little value to the student. The descriptions of the bones and joints, although admirably done from a purely scientific standpoint, must be greatly enlarged and modified before they will come into general use by medical students. Whether topographical anatomy as a separate subject is not a little out of place in this work is a question on which opinions will be divided, but all anatomists will agree that Professor Thane and Mr. Godlee have given us a most accurate and thorough epitome of the relations of the various structures to the surface, which cannot fail to be of great value to the physician and surgeon.

In the second volume more considerable changes have been made than in the first, for in the past six years great advances have taken place in histological and embryological research, and the most important and trustworthy observations have been incorporated in the text. These alterations have been made very judiciously, and have been supplemented by many original investigations by the authors themselves. In the histology of the cell and of the tissues we find the latest views of the editor, Klein, and Flemming, illustrated by many new and beautiful drawings from specimens made by Professor Schäfer himself, whilst the researches of Key and Retzius, Ranvier, Recklinghausen, Ehrlich and other less known microscopists have every attention. Many new drawings from Henle, Schwalbe, and Luschka have been added in illustration of the anatomy of the central nervous system, and so much new matter has been introduced into this part of the work that it almost seems to be a new treatise. The most important alterations in the chapter on Embryology are due to the researches of His, and particularly to those of the late Professor F. M. Balfour, whose important contributions to this branch of science have considerably modified many of the older teachings on the subject. The value of the monograph on the Development of Elasmobranch Fishes, and of his masterful treatise on Comparative Embryology, can only be correctly estimated when we see the observations and views contained therein at once accepted and acknowledged by the father of embryology in Britain, Dr. Allen Thomson.

The careful and thorough revision, the many improvements, and last, but not least, the bibliography at the end of every section in the second volume, not only again mark out "Quain's Anatomy" as the best work on the subject in the English language, but make it in many respects superior even to such classic works as those of Henle, Cruveilhier, and Sappey. It is now a text-book of which every English anatomist must feel proud.

It is but justice to the publishers to add that they have not failed in performing their share of the task of producing the work. The type is unusually clear and bold, and by extra care in printing many of the old engravings have been almost transformed.

The Student's Guide to Materia Medica and Therapeutics in Accordance with the British Pharmacopœia. By JOHN C. THOROWGOOD, M.D., F.R.C.P., &c. Second Edition. London: J. and A. Churchill. 1882.

A Medical Formulary Based on the United States and British Pharmacopœias, together with numerous French, German, and Unofficinal Preparations. By LAWRENCE JOHNSON, A.M., M.D. London: Sampson Low, Marston, Searle, and Rivington. 1882.

Catalogue of the Collections in the Museum of the Pharmaceutical Society of Great Britain. 1878. Compiled by E. M. HOLMES, F.L.S., Curator of the Museum.

WHATEVER satirists may say to the contrary, the value of medicines in the practice of physic is only beginning to be realised. The growing efficiency of chemistry as a handmaid of medicine, analysing medicinal substances and separating in minute forms their active principles, and the closer study of the action of medicines, both from a physiological and pathological point of view, have resulted in therapeutical discoveries of the greatest interest and value. To take one instance only, that of the action of pilocarpine, the active principle of jaborandi. What action of any of the older diaphoretics will compare in certainty and efficiency with that of pilocarpine, which will produce salivation and diaphoresis within ten or fifteen minutes of its administration? Of course the discovery of such powerful agents involves a corresponding obligation in those who use them to do so intelligently and carefully. Hence the increasing importance of works on materia medica, three of which we have named at the head of these remarks, and which, in their several ways, will be found very useful on the table or in the carriage of the practitioner.

Dr. Thorowgood's book has worthily reached a second edition. It assumes a knowledge of, or the means of reference to, the British Pharmacopœia. But it explains the principles of the chief pharmaceutical processes employed in making the preparations of the British Pharmacopœia. It would be greatly enhanced by a more complete supplementary notice of drugs which, though not in the British Pharmacopœia, are used by the best practitioners in this or other countries. Unfortunately, the British Pharmacopœia does not at any given time include some of the most valuable preparations and drugs. Notwithstanding this defect, Dr. Thorowgood's book is a most excellent one, not only for students, as he modestly says in the preface, but for practitioners. It gives a clear and concise account of the chemical and pharmaceutical bearings of a drug. But the therapeutical part of the book is also admirably executed. It indicates the personal opinion and experience of the author, in a way not fanciful and far-fetched, but judicial and practical.

The work of Dr. Lawrence Johnson, of New York, has a plan larger than, and different from, Dr. Thorowgood's. It aims at giving the drugs and preparations in common use, and includes those of all the Continental, British, and the United States Pharmacopœias. It seeks too to give not merely pharmacopœial preparations, but formularies from leading hospitals and practitioners. It is weak in the statement of therapeutical doctrine and experience, but is nevertheless a work of very great convenience, and one implying much labour and trouble on the part of the author.

The Catalogue of the Collections in the Pharmaceutical Society of Great Britain is a collection which every practitioner would do well to take an opportunity of seeing whenever it presents itself. It is useless for a practitioner to attempt to keep pace with the rapid achievements of organic chemistry and advanced pharmacy. Every week discovers a new alkaloid or a new preparation. But there is no place where an inquiring practitioner can spend a more profitable half hour than in the museum of the Pharmaceutical Society, where he is not unlikely to have at once his pleasure and his knowledge enhanced by meeting Mr. Holmes, the author of the very valuable catalogue under notice, which we may hope soon to see superseded by a new edition.

Diseases of Women. By ARTHUR W. EDIS, M.D. Second Edition. London: Smith, Elder, and Co. 1882.

WE so fully reviewed the first edition of this work that we shall content ourselves with a few remarks on the second edition. Of the errors which we pointed out many have been corrected, but some retained. For instance, our author adheres as tenaciously to the pathological view of "glairy cervical mucous like white of egg" as this clings to the place of its birth. This is an accurate description of the normal and healthy secretion of the cervix, which may,

indeed, be associated with other pathological conditions, but shows that, whatever else is wrong, the secreting apparatus of the cervix is right. The retention of such an error as this must result in the unnecessary and prolonged treatment of numbers of healthy women, and it is in our opinion as easy and as rational to cure this condition as it would be to put a stop to the secretion of gastric juice by the stomach or saliva from the mouth. We are not sure how far the actual words of the description are answerable. "Glairy" is a mysterious and ill-sounding word, and "glairy tenacious discharge" sounds terrible indeed. What woman could live comfortably with a "glairy tenacious discharge" from her uterus? Although Dr. Edis has become decidedly less heroic in his second edition, we think that the mention of any operation endangering life should include a careful definition of the objects in view, the risks run, the prospects of success, and the indications calling for, or at least justifying, the procedure. Such an operation as division of the cervix should surely not be left as a "something to be done." In treating the subject of Sterility, Dr. Edis recommends (p. 478) the preliminary elimination of male incompetence. Is the examination necessary for ascertaining this, then, to become a practice with "the student and junior practitioner"—to whom the work is addressed—whatever may be Dr. Edis's custom in such cases? It remains to say that the second edition has in no way changed the opinion we formed of the first.

Ogilvie's Imperial Dictionary of the English Language. Edited by CHARLES ANNANDALE, M.A. London and Edinburgh: Blackie and Son.

THE amount of information contained in the older editions of this work has rendered it invaluable to English-speaking peoples for the last quarter of a century, and we cordially welcome this, the latest edition, and predict for it a large and well-deserved sale. Enriched as it is by the addition of new quotations illustrative of the various changes a word may undergo, and the shades of meaning it may possess, it may be regarded not solely as a mere dictionary, as that word is commonly understood, but as a valuable addition to the English encyclopædic literature of 1882. We note with special pleasure the correct and clear meanings that are given to scientific words—medical, chemical, zoological, &c.; and can well understand the pains and trouble that have been taken in these various departments; the woodcuts are numerous and admirably executed; the classical quotations and derivations with which the work abounds are extremely appropriate to a dictionary of a language which is indebted for words to so many different sources as is the English language. Printed in clear legible type, on good paper, and bound in a solid and useful form, this book fully merits the name "imperial,"—a word which is defined in it, amongst other meanings, as "anything of unusual excellence." It is one of the few works of its kind that we are able to speak of in terms of high commendation, and we feel that Mr. Chas. Annandale and his coadjutors deserve praise for their labours, which, it is stated, have extended over ten years.

Christmas Cards.—The development which the "institution" of Christmas cards has obtained is, it must be confessed, almost marvellous. It is impossible to estimate the amount of time, ingenuity, and artistic skill expended in the production of the "things of beauty" which at this season of the year find their way into nearly every English home. Two packets of elegant trifles of this class have reached us. One comes from the ARTISTIC STATIONERY COMPANY, LIMITED, Dyers'-buildings, Holborn, and includes a selection of choice designs on card and gelatine, and etchings on satin. The cards are remarkable for chasteness and originality, and are deserving of high praise. The etchings especially are worthy of commendation. The second packet is from the firm of Mr. WILLIAM LUKS, of Bedford-street, Covent-garden. These cards are of five sizes, and consist for the most part of floral groupings, standing out in life-like form and colouring on substantial and worthily permanent mounts. They are certainly beautiful specimens of art.

New Inventions.

CARBOLIC SPRAY PRODUCERS.

ON two previous occasions (Oct. 25th, 1879, and July 24th, 1880) we have written in terms of praise of the spray producers manufactured by Messrs. Matthews Brothers, of Carey-street. We have now to record some further improvements adding to the efficiency, safety, and convenience of these apparatus. The improvements may be enumerated as follows:—1. Filter of finely perforated metal tube to top mount, protecting delivery-point and valve from the impaction of foreign particles from the interior of the boiler. 2. Filter to protect delivery-point. 3. Joint near "point" giving universal movement, and forming stopcock when at right angles. 4. Copper reservoir for carbolic solution, at the base of the stand, doing away with the ordinary glass jar, and enhancing the portability, as well as keeping the lamp cooler. 5. Metal filter, instead of sponge, on india-rubber tube from the carbolic acid solution. 6. Simplification of slide-tube regulating lamp flame. 7. Increased size of feed-hole to boiler, expediting filling, and allowing of thorough examination of interior of boiler. 8. Horned "point" protector, instead of the hood. 9. Change in safety-valve, which is now provided with set screw to facilitate cleaning. The piston of the valve, instead of being solid, is now composed of three fine rods, thus enabling steam to escape through the whole of the steam-way, and relieving pressure in half the usual time.

EUCALYPTOL SPRAY.

THIS apparatus, manufactured by Messrs. Mayer and Meltzer, was devised by Mr. Robson, of Leeds, with the view of producing an aseptic and antiseptic atmosphere. It consists of a series of wide metal tubes, through which the air is forced by bellows. The first tube is filled with cotton-wool, which acts as an efficient filter, and the second and third tubes are filled with pumice-stone saturated with eucalyptol. The air is distributed by means of five coralline nozzles working on a universal joint. It has been used by Mr. Robson himself, Mr. Teale and Dr. Churton, at Leeds, and by some metropolitan surgeons. If the air thus filtered and saturated with eucalyptol be as efficient as the carbolic spray, it is needless to say that Mr. Robson's apparatus possesses very obvious and important advantages over the older spray-producers.

"THE DISCOVERY OF TRICHINA SPIRALIS."

To the Editor of THE LANCET.

SIR,—If I had sent to press my note to Mr. Wormald acknowledging the parts enabling me to make the discovery of the microscopic worm, an earlier date would have been attached thereto. But I was more concerned in the working out the evidences of its structure and zoological position than in a mere announcement of the contents of Mr. Hilton's cysticerci. The consequent delay giving me the opportunity of referring to Mr. Paget's observation on the same subject, will not, I feel assured, be interpreted as a mere zoological elucidation of a species of entozoon for a knowledge of which I had been indebted to another, and of which I had not been a *bonâ fide* and independent discoverer.

I am, Sir, yours obediently,

Sheen Lodge, Richmond-park, Nov. 30th, 1882. RICHARD OWEN.

THE LANCET.

LONDON: SATURDAY, DECEMBER 9, 1882.

IT is well understood that the Scottish Universities are opposed to the establishment of Conjoint Boards by the compulsory fusion of the existing examining bodies in each division of the kingdom. They are satisfied with things as they are; and well they may be. They educate probably as many students as all the London schools put together, and their Degrees, though only qualifications in medicine, entitle the holders to registration. Still, it is not so easy to see why they should think it consistent with their dignity and duty as great and famous medical schools to oppose legislation which, in the opinion of the great bulk of the profession, of the Medical Council, and of successive Governments, is necessary in the public interest, and which would be a great boon to the poor medical student, on whose back such heavy burdens of education and examination are laid. It is true that their graduates, under the system of licence by a Conjoint Board, would not be able to register without first passing the final examination of one of the Conjoint Boards in clinical subjects. But let us see how the Commissioners put their proposal with regard to the Scotch as to all the other universities of the kingdom.

"We do not propose in any way to interfere with their teaching [that of the Scotch universities], nor do we believe that students will cease to recognise the cheapness and excellence of their education. We propose that all their examinations, save the final one, should, if satisfactory to the Medical Council, be accepted by the Divisional Board, and we require from them no concession which is not required from every other university and corporation in the kingdom, &c. &c."

In other words all the university examinations are to be accepted but the closing one in clinical subjects, at a cost, probably, of a five pound note. Persons who are not possessed with the fear of the imminent ruin of the Scotch universities will be apt to think that legislation in this line will actually benefit the Scottish universities. A student will be apt to say to himself, "By passing the university examinations, I not only secure a degree and an honourable title, but ensure exemption from all other examinations by mere licensing authorities, but one that will give me no trouble and cost me little money. I will make an extra effort to enter the profession through a Scottish university, where so much is done for medicine." This seems so clearly the tendency of such a system that we should expect to see the Scotch universities eagerly accept it, apart from their binding duty to consider the question from the standpoint of what is best to give public satisfaction. It may be said that this privilege of the universities—Scotch and English too—is to be dependent on the satisfaction of the Medical Council. So it should be. The Scottish universities ought to be sufficiently conscious of the worth of their examinations and their education to invite the criticism of the Medical Council. They are no friends of the universities or of Scotch graduates who shrink from this.

Professor TURNER, in his dissent from the proposal of the Royal Commissioners to form Divisional Boards, speaks with proper pity for the student in regard to any legislation calculated to increase the cost of examinations. But we do not see that under a proper Conjoint Scheme the University graduate at least will be mulcted of so much as he is at present by the existing authorities. A graduate is seldom content with his mere degree; he wishes to have a diploma besides, and generally takes it from a College of Surgeons. Under the proposals of the Commissioners he will, after passing his University examinations and the clinical examination of the Conjoint Board, be completely qualified, and have an honourable Degree for a much less sum than he now must generally pay for similar advantages and multiplied examinations.

It will be the more unseemly if the Scottish Universities oppose any well-considered legislation on the lines of the Royal Commissioners, inasmuch as the interests of these Universities are safe-guarded by the Commissioners on a proposal offered by Professor TURNER himself, and endorsed by Professor STRUTHERS, before the Select Committee of the House of Commons. Here is a quotation from the evidence of Professor TURNER before that Committee:—

"Question 3155, by the chairman, Mr. W. E. Forster. Is there not another direction in which the difficulty might be met?—There is: and I have another suggestion to make, and that is, that the conjoint examination, so far as regards university candidates, should be restricted to the clinical examinations—that is, the examinations in clinical medicine, clinical surgery and midwifery, which would test whether a man really has a knowledge of practice, because that, I submit, if there is to be any legislation, is really all that is needed. I would consider that all that is required, if you are going to have legislation, is that you should satisfy yourselves that every man going into practice has got that amount of information which is necessary for practice, and that may be got through an examination in clinical medicine, in clinical surgery, and midwifery. That is an alternative proposition; but I consider that our clinical examinations, as at present constituted, are an ample test of competency to practise."

Professor STRUTHERS put in a paper before the Committee which, though ten years old, he said "exactly expressed the present opinion of the Faculty of the University of Aberdeen." It said:—

"The security which the Faculty desires would be given by the introduction of the following provision as a substitute for Clause 10, Section 2: 'Candidates for admission to the examination, who are also candidates for university graduation, and have passed the examination or examinations conducted by the university on the accessory and fundamental sciences of medicine, including chemistry, natural history, botany, anatomy, and physiology, shall, on their having completed the curriculum of study required for examination by the medical examining board, be entitled to be admitted to the final examination of the board on payment of a fee not exceeding five pounds.'"

Dr. GAIRDNER objects, in a letter to Dr. GLOVER, published elsewhere, to being supposed a party to such offers as are involved in the above answers of Professor TURNER and Professor STRUTHERS. And it is quite true that he much preferred the alternative proposition to allow assessors representing the Medical Council to take part in the University examinations. But Dr. GAIRDNER will not deny that

Dr. GLOVER was substantially right in saying that the Commissioners have adopted a proposal made by eminent representatives of the medical interests of Scotch universities with whom he was in general accord. Since this proposal was made, the principle of a reduction in the number of Licensing Boards has received the support of a Royal Commission, and the Scottish universities will be very badly advised if they resist legislation on a Report embodying safeguards for them suggested by Professor TURNER and Professor STRUTHERS.

THE term "dyscrasic albuminuria" has been applied to the albuminuria which depends on a change in the blood, and is supposed to be independent of structural alterations in the kidney. Its mechanism has often been the subject of speculation, and attempts have been made from time to time to elucidate the problem by experimental research. It is true that the exact conditions of dyscrasic albuminuria in man cannot be exactly reproduced in animals, but the injection of various albuminoid substances into the blood of animals has thrown considerable light on the probable origin of this form of albuminuria. Such bodies as egg-albumen and casein, injected into the veins of an animal, pass into the urine, at least in part. The explanation which is usually given of this fact is that these albuminoid bodies have a diffusive capacity which is higher than that of the albuminoid bodies contained in the normal serum, and hence the latter remain in the blood, while the former pass out through the kidneys. The fact appears to be true within certain limits. ESTELLE and FAVERET, pupils of LÉPINE, and working under his direction, observed that by injecting into the veins one of the albuminoid constituents of normal serum, serin or globulin, there is produced in the animal serinuria or globulinuria respectively—i. e., a special albuminuria in which the substance injected reappears in the urine. LÉPINE, in a note published in the *Lyon Médicale*, thinks that these results cannot be readily explained on the hypothesis that the effect is due to a difference in diffusibility. It seems, *a priori*, unlikely, he thinks, that the manipulations necessary for the isolation of serin or globulin should so change their diffusive power as to account for the result. At any rate, the hypothesis is unable to explain the albuminuria which results from the injection of normal serum into the veins. It was formerly believed that the latter effect could be explained by an assumed increase in arterial tension, but we now know that this tension is not sensibly modified by the injection into the veins of a small quantity of serum. The phenomenon can, LÉPINE believes, be explained by considering the particular conditions in which it occurs. It does not happen if a small quantity of perfectly fresh serum is injected into an animal of the same species; it occurs, however, if serum of the dog is injected into a rabbit. This is in harmony with the fact that the transfusion of small quantities of perfectly undefibrinated blood into an animal of the same species produces no ill effect, but if dog's blood is transfused into a rabbit, there is necessarily dissolution of a certain number of red globules, with consequent hæmoglobinuria. LÉPINE suggests that the same explanation may be given of the albuminuria which results from the injection of heterogeneous serum. The effect is due to the injurious action, of the substance injected, on the blood-corpuscles in one case, on the kidney in the other. All our tissues are susceptible to a dyscrasic influence, however trifling, and the renal glomeruli do not escape the general law. The albuminuria may be the result of the influence on the tissues of the glomeruli, and its only manifestation. As far as our methods of observation go, the serum of the dog *seems* to be identical with the serum of the rabbit, but however slight is the difference between the two, it is sufficient to determine an albuminuria, and may be sufficient to irritate the kidney of the subject transfused. It is not, therefore, surprising that isolated globulin or serin injected into the veins should produce a similar irritation of the kidney.

A grave difficulty in the way of this hypothesis is the fact that the result of the irritation is the passage of the irritant substance only, and not of the normal serum-albumen of the blood. LÉPINE admits this, and suggests an explanation which, at first sight, appears very hypothetical. He suggests that the pores of the renal filter are only enlarged on the contact of the irritant molecules, and close immediately after the passage of these, just as our soft tissues permit the passage through them of foreign bodies, as needles, although no permanent solution of continuity results from the passage. According to this hypothesis, a dyscrasia, in order to give rise to albuminuria, need not necessarily act upon the albuminoids. It is sufficient that either the albuminoid or the saline materials of the serum should be modified quantitatively or qualitatively. In support of this proposition he cites some experiments which he has made, in which transient albuminuria has been produced in dogs by injecting chloride of sodium in the proportion of one per thousand of the body-weight of the animal. If the solution is but little concentrated, and the injection is slowly made, no perceptible effect is produced except the albuminuria, which results apparently from the action of the altered blood upon the kidney. We may point out, moreover, that the theory of LÉPINE derives support from experiments lately published by KNIPERS on the effect of the injection of egg-albumen into the blood. STOKVIS and LEHMANN had shown that the amount of albumen which then passes off by the kidney may be actually greater than that which is injected into the blood. KNIPERS only corroborated this statement in two out of twenty-two cases. In several instances hæmoglobinuria was also produced, and apparently depended on the quantity of water which was injected with the albumen. It occurred whenever the amount of albumen exceeded two per thousand of the body-weight of the animal, and irrespective of the addition of chloride of sodium. Moreover, the effect was not confined to the excretion of albumen. An estimation of the nitrogen and phosphoric acid, made in six experiments, showed a constant increase in the elimination of phosphoric acid, and an occasional increase in the elimination of nitrogen. The latter occurred especially in the cases—not rare—in which the animals lost flesh. Intravenous injections were followed by intense and prolonged dyspnœa. The most important fact ascertained by the experiments, so far as the origin of the albuminuria is concerned, is that the kidneys almost invariably presented structural changes. The kidneys were swollen, the epithelium of the tubules presented cloudy swelling here and there, its nuclei were increased in number, and minute fatty globules were scattered through it. The

glomerular capsules were sometimes distended by a mass, solid after the organ had been boiled; sometimes the capsule was simply raised, and appeared separated from the glomerulus by an empty space. The interstitial spaces of the kidney appeared to be enlarged, and their cell-elements increased in number. Hyaline or granular casts were found in the tubules or in the urine. The occurrence of these structural changes certainly gives some support to the theory of LÉPINE (not altogether new), that it is by an action on the kidney that blood-states cause albuminuria.

THE Edinburgh Royal Maternity[1] is a small hospital in which about two hundred women are annually delivered. Its medical staff consists of several of the leading accoucheurs of the Scotch metropolis. They serve the hospital in turn, each for three months, and they publish accordingly quarterly reports of the work of the hospital. There is an out-door department, with which we are not at present concerned. The quarterly reports laid before the Obstetrical Society of Edinburgh, and published in its Transactions, are of considerable value in the respect that they make known from time to time the amount of success which has been obtained in the working of the charity. The example thus set by the Edinburgh hospital is deserving of imitation by the lying-in hospitals of London as well as by those of the provinces. There are four lying-in hospitals in London, in which from twelve to fourteen hundred women are confined every year, and no account of the working of any one of them is made known to the profession, unless the annual report issued to the subscribers be regarded as such. A full report of the medical work carried on in them is nowhere published, and the loss to science thus accruing is, or ought to be, incalculable. The method of carrying on the work of the Edinburgh charity has within the last few years been greatly altered. The mortality had always been high, and, with a view to reducing it, the systematic use of antiseptics was introduced, and Dr. HALLIDAY CROOM drew up a series of rules to be observed by the nurses and by the students attending the practice of the hospital. These rules have regard to the disinfection of the hands of the students and attendants, of instruments and appliances, and of the generative passage. Most of these rules are unexceptionable, but some of them are calculated to encourage an unjustifiable sense of security. Such are the rules relating to sponges and linen fabrics, which absorb infective material with great readiness, and retain it with great obstinacy, so that it is not possible to be certain that they have been rendered again non-infective and harmless by washing, boiling, or soaking in a solution of carbolic acid. They can, however, be entirely dispensed with: diapers can be replaced by cotton-wool or fine tow, and sponges by cotton-wool, all of which can be burnt when used. In this way a very grave source of danger may be completely removed. The rule prohibiting the admission of visitors unless provided with a special pass from the resident medical officer appears unnecessarily severe, especially when it is borne in mind that women when taken in labour are admitted from the poorest and most wretched homes. Disease may doubtless be carried into hospitals by visitors, and this is more especially true of children's hospitals. In hospitals where the inmates are adults such occurrences are rare, and it has yet to be proved that the poison of the acute specific diseases (if we except erysipelas) plays any part in the production of puerperal fever. The introduction of these rules into the practice of the hospital appears to have exercised a beneficial influence. From the foundation of the Edinburgh Lying-in Charity up to November, 1880, the maternal death-rate was nearly 2 per cent. In May, 1879, a new hospital was opened. The building was completely new, "with all the most modern sanitary improvements, examined by the most competent sanitary authorities," and yet, under these apparently favourable circumstances, between May 1879 and Nov. 1880, out of 320 women delivered in the institution, 12 died, and 10 of these from metria—a mortality of nearly 3·8 per cent. During the three quarters ending April 30th, 1881, 150 women were delivered, and 5 died; while during the year ending April 30th, 1882, 225 women were confined, and 3 died. This is a high death-rate, but there are doubtless causes contributing to it which are not met with in out-door practice, for during the last year there were in 225 cases, 22 preternatural or complex labours, and 17 instrumental deliveries. During the previous nine months, of 159 deliveries, 18 were forceps cases, and 10 were of a complex or preternatural character. This high proportion of abnormal and instrumental labours may in some degree account for the high mortality. At the same time a stricter supervision of attendants, and greater care in carrying out antiseptic precautions, will probably reduce the mortality below any yet seen in the hospital.

[1] Quarterly Reports of the Royal Maternity and Simpson Memorial Hospital.

THE general concern which is excited by the serious illness of Mr. FAWCETT will be shared, in a special manner, by all members of our profession, and has doubtless been increased by the change in the character of the later bulletins. Some surprise has been excited by the altered language regarding the disease which followed the consultation with Sir WILLIAM JENNER on Saturday last, and the rather vague announcement that the fever accompanying the diphtheria had "assumed a typhoid character." It is not difficult, however, to find an explanation of the change. The coincidence of diphtheria and typhoid fever has been several times observed. Indeed, it is a matter of surprise that the two diseases are not more frequently concurrent. Their conditions of origin, as far as we understand them, are nearly the same. Although the causes of each often elude discovery, especially those of diphtheria, there is a strong consensus of fact to show that each occasionally arises from the inhalation of sewer gas. It is a moot point whether, in the cases in which the two are coincident, the patient is actually suffering from two distinct maladies, or whether the diphtheritic membrane in the throat is the result of the poison which causes the typhoid fever. There is much to be said in support of either view. There is one other disease in which throat diphtheria occurs not unfrequently—scarlet fever. The cases of scarlet fever thus accompanied are always severe; and it seems certain that the false membrane in the throat is the result of the scarlet fever poison, and is not the expression of a coincident and independent affection. This fact renders it conceivable that the typhoid fever poison may also be capable of causing a similar local affection.

But, on the other hand, diphtheria is an extremely rare complication of typhoid; false membrane is, as a rule, absent, even in the most severe cases, in which the poison is most intense in its action. Hence it is clear that, if the diphtheria is due to the typhoid poison, the latter must have, in such cases, some special character. But the fact that the throat affection runs its course and subsides, while the typhoid fever continues, makes it on the whole more probable that the two diseases are coincident, the results of separate poisons, doubtless generated together, and obtained from the same source. If the diphtheria occurs, as in the case of Mr. FAWCETT, early in the course of typhoid fever, the existence of the latter can scarcely be suspected at first. Even in an uncomplicated case of typhoid fever, the nature of the disease can rarely be diagnosed with certainty until the end of the first week or ten days. Thus diphtheria commencing nearly at the same time as the typhoid would have run its course, and be in process of subsidence, before the nature of the typhoid malady was clear, or even its existence could be suspected, since its only symptoms up to the end of the first week or ten days might also be due to the diphtheria. Indeed, it is somewhat remarkable that the existence of the typhoid fever should have been discovered in the case of Mr. FAWCETT before the subsidence of the throat affection gave significance to the continued pyrexia.

This combination of diseases is one of the most grave with which medical art is called upon to deal, and the anxiety which it has caused is certainly well founded. Happily it is not necessarily fatal. A case in Paris, on which we commented some time ago (THE LANCET, June 25th, 1881, p. 1037), presents considerable analogy to Mr. FAWCETT'S, and the patient recovered. The false membranes in the throat made their appearance on the fourth day of the disease, and continued until the twelfth. The abdominal symptoms and eruption of typhoid were characteristic, and the patient had to contend against the additional complication of an attack of phlebitis on the nineteenth day. The unquestionable gravity of initial complications of typhoid is perhaps apt to be over-rated. It seems impossible that a patient should live through such a disease as typhoid fever when it supervenes on another malady (for instance, pneumonia), itself sufficiently severe to prostrate him completely, and yet every physician can call to mind such cases in which the typhoid fever was borne at least as well as in other instances of like severity, with no preliminary disease to lessen the patient's strength. While, therefore, there is cause for much anxiety, there is also reasonable ground for hope that a life so valuable may be spared.

WE regret to have to report another case of a practitioner signing a certificate of death for a case seen not by himself but by his assistant. The mother testified that the child was taken ill on Oct. 5th, and taken to a surgery, where it was seen and prescribed for by an assistant. The usual certificate was given by the principal. The defence was that the latter had seen the child in September, which was denied by the mother, and that the assistant was qualified. It was not explained why, if the assistant were qualified, he had not signed the certificate. The magistrate considered that the law had been broken, not corruptly but knowingly, and ordered a fine of £5 and costs.

Annotations.

"Ne quid nimis."

THE LATE PROFESSOR FRIEDREICH OF HEIDELBERG.

THE first article in the current number of Virchow's *Archiv* is contributed by the illustrious editor himself, and is devoted to a memoir of Nicholas Friedreich, one of Virchow's early pupils, who died a few weeks since of aneurism. Professor Virchow remarks that on the occasion of the festival given in his honour last year, all but one of his former assistants during thirty years were living—that one being Professor Hoffman of Basle, who died in the previous year. Since then two others have passed away, Karl Hüter and Nicholas Friedreich. The latter was at Wurzburg when Virchow came there in 1849, and had just distinguished himself, with his fellow-student Gegenbaur, by a memoir upon the skull of the axolotl. It was natural that Friedreich should be attracted to Virchow's side, for he seems to have been a man moulded in the same type, full of the spirit of scientific inquiry; and an attachment grew up between them from that time. The former pupil invariably, in after years, submitted his work to the criticism of his master, and became a constant and prolific contributor to the pages of the *Archiv*. In the preface to his best-known work, that on Progressive Muscular Atrophy, Friedreich records the indebtedness he was under to Virchow; and now in the article above referred to the latter shows to how great an extent their feelings were reciprocal. Friedreich's last writing is published in the same number of the journal that contains this tribute to his memory. We do not desire to criticise it, although we cannot endorse its conclusions, striking as the cases apparently are whereby they are supported. Briefly, it consists in the advocacy of a surgical method of treatment of certain cases of inveterate hysteria similar to that which, some sixteen or seventeen years ago, was so indiscriminately urged by a late London gynæcologist, with the most disastrous results to himself. Where, however, the latter employed the knife, Friedreich advises the actual cautery; and, in referring to the history of the subject, he cannot understand why in London the question was treated upon moral rather than scientific grounds, yet in spite of his arguments, and the melancholy circumstance that forces his paper upon attention as being the last product of an active mind, we do not think the practice will be reintroduced into this country, even under the limitations he enjoins.

THE LAST HOURS OF THE PRIMATE.

SOON after our last report of Archbishop Tait's condition (October 7th) he seemed somewhat to improve; the lungs cleared, the respiration decreased in frequency, falling to 26 per minute; the heart maintained its improved condition, but the pulse seldom fell below 100. To outside observers he seemed to be gaining ground; he sat up for several hours each day, and transacted a good deal of business, but on one occasion, when an attempt was made to place him upright, it was immediately seen that his muscular power was very defective. The respiration at once became very frequent, and the pulse rose to 130, but the aortic murmurs did not again develop. He was well able to take food, which was apparently assimilated, so that hopes were entertained by his friends that he might be able soon to make a change to the South. This was not, however, the opinion of his medical attendant, and in that he was supported by Sir W. Jenner and Sir W. Gull. Occasionally the contents of the stomach were thrown up suddenly, without apparent cause; now and then there was a tremulous motion in the left arm and leg, which occasionally extended to the right; the tremor would last a few minutes, and was similar to that

of paralysis agitans. This tremor culminated in a convulsion which affected the left arm and leg, but not the face; this was manifest when an attack came on whilst Dr. Carpenter was present. These attacks were similar to those experienced by his Grace fourteen years ago; they recurred at first at intervals of a few weeks, then after a few days; they were generally (not always) preceded for a day or two by a continuous nausea, and a condition which he himself described as a bilious state. When the colder weather set in about the middle of November there was a rise of temperature from 99·5° to 101°, a return of congestion in the lungs and dulness on percussion, but the cough was not very troublesome, and the expectoration did not again become rusty. Notwithstanding this rise, the Archbishop disliked to remain in bed, and continued to sit up for a few hours every day until four days before his death. The troubles connected with the state of the kidneys continued, and on several occasions it was manifest that a large cyst existed, which occasionally filled, and gave rise to great discomfort; this was usually remedied by gentle pressure with friction, by which means the cyst was emptied. During the last week of his illness the pulse gradually became more frequent and the respiration shorter; the tremulousness became more manifest on the right side until early on Friday morning, when a more general convulsion occurred, but not affecting speech or consciousness. From that time the temperature began to fall, and the urinary secretion to diminish in quantity. Three or four tremors occurred before the end came; there was one on Saturday night, which he recognised by calling out, "It is coming—it is coming," and after it had passed he asked for a little water, and soon after sank into a doze. The temperature at that time was 96·8°. There were two slighter convulsions in the course of the night, and he passed away without any other changes than falling temperature and slowing pulse and respiration, until the latter ceased at 7.15 A.M. on December 3rd. There was a very peculiar state of the body on the following day. The wrinkles had disappeared from the face, all sign of heaviness and suffering were gone, and the countenance of the Primate was more like that of a young girl smiling in her sleep than that of an aged man; this impression was produced by his wavy curls and whiskerless cheeks.

A SCOTTISH NATIONAL CHANGE.

WHEN Dr. Johnson issued his famous sally upon the poor of the Scottish people there was much of truth in the remark that oats—or, at least, oatmeal—constituted the diet of the northern people, while they were reserved for the use of the horse in England. Scotchmen need not feel ashamed of the charge, as upon this food work of a kind to render the world a debtor to their country has been done; and the simple surroundings of many a Scottish youth have been the fitting preparation for a life of honourable toil and subsequent distinction. With such a history as that of the Scottish peasantry—for it is specially to them that our remarks apply—their well-wishers will be anxious that changes should have due consideration, and that they be not undertaken rashly or in ignorance. We fear that the characteristic simplicity in Scottish, and perhaps English, rural life is being fast lessened, that the aggregation of our population, which goes on apace, is productive of physical evils to those specially affected, while those left in the country accommodate their method and manners to those of the town with but doubtful advantage to their own wellbeing. In nothing is the change more manifest than as it affects the food of the people. Attention has recently been given to the fact that food literally makes the man, and a nation well fed must be a nation prosperous and happy in most respects. But the nutritive value of foods differs so much that greater attention might profitably be given to the question, and the people shown that quantity alone ought not to be considered irrespective of the force-giving powers of food. Judged either physiologically or economically, the Scottish national diet of porridge and milk must be highly esteemed, and it is questionable whether any other food in common use is so useful as a force-giver, while so cheap and easily obtained. During recent years we learn that oatmeal has become less and less the food of the Scottish people. Even in the agricultural districts, where this article forms part of the labourers' wage, it is no longer freely consumed by that class, but sold or exchanged for articles such as tea and other doubtfully nutritious commodities which are now habitually used as substitutes. Milk has long been allowed to farm labourers in sufficient quantity to be of the greatest value as a food for the young, but in many cases this too is stopped, and money given instead. The working classes should know how their best interests are affected by this gradual change, while farmers and other employers must observe the working power of their *employés* gradually diminish as insufficient and improper food takes the place of that till now in general use. There is no more important question than the best and cheapest food for the general population of a country; and a nation which by good fortune has hit upon a system so excellent as the Scotch should not lightly throw aside the advantage thus gained.

ORCHITIS IN TYPHOID FEVER.

ORCHITIS is one of the rarest complications of typhoid fever. So uncommon is it that its occurrence is not even mentioned in Murchison's classical account of the disease. Nevertheless a good many cases have been lately recorded. An instance (of doubtful nature) was described by Bouchut in 1867; and Dr. Duffey observed in the same year, at Malta, no less than eighteen examples of this complication of Maltese fever. Since then a number of cases have been observed in France, and at the beginning of last year its occurrence in the Mediterranean fever was described in our columns by Ellis. Another example has been lately published in *L'Union Médicale* by M. Sevestre, who has added some interesting comments on the complication. The patient had suffered from a severe attack of typhoid, of ordinary type, and was in full convalescence, free from fever, walking about the ward, when he suddenly experienced considerable pain about the groin, and it was found that the right side of the scrotum was reddened, and the testicle swollen and painful. The epididymis was not involved, but the spermatic cord was slightly painful. The left testicle was normal. There was no urethral discharge. The inflammation gradually subsided, and had disappeared at the end of six days. The affection usually comes on in the same sudden manner as in this patient. In most other cases the onset occurs during convalescence—three, six, ten, and even twenty days after the cessation of pyrexia. In no recorded case had any complication accompanied or followed the fever to which the orchitis could be referred. The onset of the testicular inflammation is usually attended with a return of fever, and the temperature may even rise to 103° or 104° F., the pulse to 120, and violent rigors may occur. In such a case, especially if the local pain is slight, the physician may think he has to do with a relapse of the typhoid, and in a case of unexplained pyrexia during convalescence from this disease the testicle should always be examined. In very rare cases the orchitis comes on before the primary fever is over. When the pain is slight it may only amount to a sense of uneasiness in the testicle, which is not always exaggerated by pressure. When severe it does not amount to a very intense degree, and is never neuralgic in character. The inflammation is always unilateral, and the epididymis is never involved. It appears to be more frequent on the right side than on the left (in seven out of nine observations). In

the majority of cases (eight out of twelve) the affection is trifling; the inflammation does not go beyond the congestive stage, and it ends in from six to ten days. Occasionally even this degree is not attained, and transient hyperæmic swelling alone is noted. Sometimes its course is less benign; the local inflammation attains a considerable degree of intensity, and pus may be formed, and the suppuration may go on to complete destruction of the organ. Moreover, in the cases which run a mild course the affection may leave a persistent induration about the epididymis, and in one case atrophy of the testicle ensued. The pathology of this complication is still obscure. That it should recur especially in certain epidemics affords no explanation of its origin. Of the theories proposed, that it is a rheumatic inflammation, or one allied to the inflammations which follow scarlatina, or that it is due to a thrombosis in the spermatic vein, none appear satisfactory.

DOWNING COLLEGE, CAMBRIDGE.

WE are glad to learn that Downing College, Cambridge, is assuming the position in the university which was contemplated in its foundation. It was founded at the beginning of the century for the especial promotion of law and medicine. A professorship of each of these sciences was handsomely endowed, and all its Fellows were required to belong to one or other of these professions, and it was presumed that they would promote the study of law and medicine in the university. This is now being done. Besides the professors there are now three lecturers in each science, and the students can thus obtain all the personal superintendence of their studies required for the examinations without incurring the expense of private tuition. The number of students both in law and medicine has been recently increasing, and last year the success in University honours in the two sciences was marked. An additional impulse to the study of medicine has recently been given by the election to a fellowship of Mr. Alex. Hall, M.A., M.B., who was highly distinguished in the Natural Sciences Tripos, and is at present Demonstrator of Anatomy in the University Medical School. He acts as adviser to the undergraduates in their medical studies, and also lectures in the college.

THE BOARDING-OUT SYSTEM v. WORKHOUSE SCHOOLS.

A DEPUTATION waiting on the President of the Local Government Board the other day, to urge the expediency of extending the boarding-out system instead of establishing more workhouse schools, was regaled with the more or less gratifying intelligence that the subject is "under consideration." Mr. Dodson went even further than this; he expressed his pleasure at the volunteer service which takes the form of raising institutions for the shelter and support of pauper children. It is well, we know, to cherish a contented mind and to cultivate thankfulness for small mercies. And it is gracious to be grateful for official utterances of the class which would seem to have afforded so much satisfaction to this deputation. Meanwhile, no one should be misled by statements which mean nothing. If the boarding-out system is to supersede that of training and teaching in workhouse schools, the desired result must be gained in the legislature, not at the feet of the President of the Board. It is ridiculous to sue any longer in the audience chamber of Mr. Dodson. The battle must be fought in Parliament, and the sooner the better. Every deputation which leaves Whitehall satisfied is a new obstacle in the way of reform, a fresh excuse for delay. Nothing can possibly be more fatal than to be told that a subject pressed on the attention of the President of the Local Government Board is "under consideration."

COLONIAL MEDICINE.

AT the forthcoming International Colonial and Export Trade Exhibition to be held in Amsterdam from May to October, 1883, a section is to be devoted to the subject of Colonial Medicine. In founding this section, it is the intention of the Executive Committee to limit it to its scientific aspects, with a view to promote knowledge upon sanitary and medical conditions in the colonies. The section is to be divided into three classes. The first class will deal with hygiene, and will comprise such matters as sanitary commissions, water supply, food adulteration, bathing and sanitary establishments, schools and public buildings, burial-grounds and cremation, sewerage, trade diseases, measures adopted against endemic, epidemic, and contagious diseases, also malarial disease, and diseases attributable to malarial sources; parasitical diseases, and their prevention; prostitution, vaccination, epizootic diseases, and mortality statistics. The second class is devoted to the organisation of the medical services, comprising the direction and administration of the civil and military medical services and the regulations governing medical practice, special medical education of colonial doctors in the mother country, medical education in the colonies, &c. The third class deals with the attendance upon and transport of the sick and wounded, and their treatment by the natives; it includes such subjects as hospitals, transport, medical literature, medical treatment and hygienic customs of the natives. Dr. Stokvis is the president of the section, and in September it is intended to hold an International Congress for Colonial Medicine in connexion with the Exhibition. The Government, having received intimation of this scheme, have communicated with the Royal College of Physicians, and that body has deputed Drs. Barclay, Bristowe, Corfield, Stevenson, and Sir Joseph Fayrer to consider upon the manner in which this country shall be represented in the section. As there is no country in the world that has wider colonial possessions than Great Britain, we may expect that a warm interest will be taken in the Exhibition here, and that no effort will be spared to provide material, upon which the success of the undertaking will largely depend.

DISLOCATIONS OF THE HUMERUS.

THERE are various methods proposed for reducing dislocations of the shoulder, some of which have proved efficacious when the old-fashioned heel-in-the-axilla method has not succeeded. Mr. J. E. Kelly, of Jervis-street Hospital, Dublin, some years since read some notes before the members of the Surgical Society of Ireland, upon certain expedients which he had found useful in reducing various dislocations. He has recently published a new method of reducing a dislocation of the humerus, and his connexion with Jervis-street Hospital, where a very large number of accident cases are annually admitted, and his private practice, have afforded him many opportunities of testing its utility. For the operation a bed firmly fixed is of importance, and should be, if a subglenoid dislocation is to be reduced, about three inches lower than the great trochanter of the operator, while one lower still by a couple of inches for the anterior dislocation, and a little higher for the posterior, allows the force to be applied advantageously in the direction of the glenoid cavity. The patient is placed on his back on the bed, close to the edge, with his head low. Mr. Kelly divides the operation into two stages. In the first, the operator places the injured arm at right angles to the body, and standing against it, with his side to the patient and his hip pressed firmly into the axilla, folds the arm and hand of the patient closely round his pelvis, and fixes the hand firmly, by pressing it against the crest of his ilium. The second stage, during which reduction is effected, consists merely of a rotation, or version, of the operator's body with a force and rapidity which vary with

the nature of the dislocation. For any additional manipulation the surgeon has the hand next the patient's axilla disengaged for such manœuvres as lifting the head of the humerus into its cavity, making traction upon it forwards or pressure backwards, according to the nature of the accident. By this method no assistant is needed, and an anæsthetic does not require to be administered.

THE MODERN SWORD OF DAMOCLES.

IT would be difficult for a malevolent genius to devise any more dangerous apparatus than a long stout wire stretched from house to house across a public thoroughfare. In some unexpected moment, under extraordinary pressure, perhaps a heavy weight of snow, it is not merely possible, but likely, that it will fall to the ground, and in falling must almost inevitably cut in two all it strikes. Nevertheless, this modern sword of Damocles hangs suspended over the head of the Londoner in nearly every street through which he passes from murky morn to drizzly eve. And, strange to say, the threatened Londoner seems in no way disturbed by the jeopardy in which he is placed. If it were otherwise, if the fear of danger dogged his footsteps, he would simply take measures to have the impending peril removed under the Nuisances Act. It is useless to remonstrate, because, doubtless, the representative Londoner has an interest in the multiplication of telegraph and telephone wires stretched overhead, and if an "interest" be vested in any nuisance or source of danger it is safe. Meanwhile, for the sake of the provincial folk and foreigners who visit the metropolis, if not of the mass of the population, it would be well to take these wires down before some terrible calamity occurs. Mr. W. H. Smith told a deputation which waited upon him a few days ago that it was vain to hope that anything would be done in the session of Parliament which has just ended. He was right. We should like to supplement this extra-Parliamentary utterance with the remark, that it is perfectly useless to expect that in any session of a legislative assembly, or by any official board, anything will be done so long as public opinion betrays no consciousness of the danger that exists. A spice of peril adds piquancy to life, and the reflection that we may "at any moment" fall victims to some hideous catastrophe is rather exhilarating to the human mind, than calculated to disturb its habitual tranquillity. This being so, it is perhaps a pity that anyone should harbour a desire that the modern sword of Damocles may be speedily removed.

COMPLETION OF THE IRISH CENSUS.

THE Commissioners charged with taking and reporting upon the Irish Census have just issued their General and Final Report, which bears date September 21st last. The Irish Commissioners have succeeded in anticipating the publication of the corresponding reports for the other divisions of the United Kingdom. The first volume of the Scotch Census Report was issued a month or two since, but no portion of the Report upon the English Census is yet available to the public. The comparatively early appearance of the Irish Report has certainly not been attained by reduction of the statistical tables, which in abundance of detail bid fair to considerably exceed that which will be available either for England or Scotland. In noticing some of the county parts of the Irish Census we expressed a doubt as to the real value of the remarkable elaboration of detail with which the information was published. Now that the report is before us in its entirety we are scarcely inclined to change this opinion. The Irish Census Report consists of four huge folio volumes, averaging more than 1000 pages each, dealing with the four provinces; and supplemental to these the General Report now issued contains 427 pages, uniform in size. When we consider that Ireland contains but a seventh of the population of the United Kingdom, it is almost alarming to contemplate the possibility of reports at equal length for England and Scotland. This would signify that the aggregate report for the United Kingdom should consist of thirty-five folio volumes, with an average of 900 pages in each It would be interesting to know whether there is any local demand in Ireland [for the fully detailed county parts of the Irish Census, as it is this form of publication which in great measure caused the enormous length of the report. We much doubt the real value of such elaboration of detail and calculation for small populations like those of many of the Irish counties. This opinion, however, notwithstanding the very abundance of information given to the public with unprecedented promptitude, only adds to the well-deserved credit which the Irish Commissioners have earned for their successful completion of this remarkable work. Some of the information dealt with in the General Report just issued will serve for comment on a future occasion.

ELECTRIC INTERCOMMUNICATION.

THE possible use which electricity may eventually prove to be in making us less dependent upon personal servants, by affording ready means of communicating with and utilising those whose duty it is to serve the public at large, is foreshadowed in the prospectus of the Electric Fire-alarm and Signals Company. The Company proposes to establish stations throughout the metropolis which shall serve as centres for various districts, having, as near as may be, a circular form, the radius of the circle being about a quarter of a mile. In this way each house in the district will be brought into electric communication with a centre not more than a quarter of a mile off, and it is reckoned that every message sent to a centre will be answered by messenger within three minutes from the time of sending the signal. The signals which may be sent will be, as a rule, four in number—viz., "Messenger," "Cab," "Police," and "Fire." The last two signals may be transmitted automatically from empty houses by means of the automatic burglar-detectors and fire-detectors, the former of which are put in action by the slightest opening of a door or shutter, and the latter by means of a spiral spring which lengthens and establishes an electrical communication on being heated above a certain point. The centres will be established close to cab stands, and a staff of messengers and police will be on duty at the centre night and day. This arrangement seems to be, in theory at least, a very desirable thing; and it is stated that, in America, companies having a similar object have done business at a considerable profit. As far as fire is concerned, the system has already been established to some extent in London; and in his report for the year 1881, Captain Shaw, of the Metropolitan Fire Brigade, states that the fire alarm circuits "have undoubtedly enabled us in some instances to save both lives and property."

DISEASE AND CHRISTIANITY IN NORTH CHINA.

THE first annual report of Mr. Harold Schofield, M.B., in connexion with the China Inland Mission, excites a hope that we shall be favoured with many others. Mr. Schofield's place of work is at T'ai-Yuen-fu, Shansi, North China. From a medical point of view the report is most interesting. The total number of cases treated in the year was 40 in-patients and 3488 out-patients. The new cases included 284 opium-smokers. The principal diseases, in a numerical respect, are anæmia, dyspepsia, bronchitis, neuralgia, diarrhœa, syphilis, and gonorrhœa; skin diseases, especially eczema, impetigo, scabies, ulcers, and abscesses. Among surgical cases are two dislocations of the femur and

two of the humerus. The skin group of diseases is the most numerous; next in number is the group of opium-smokers, who, by the way, are the only patients who pay for their medicines; next the diseases of the respiratory organs. Mr. Schofield notices, as others have done before, the commonness of hæmoptysis, and the fact that it is often attended with little impairment of the general health or other indication of lung disease. He has not seen one single case of acute rheumatism, which he attributes largely to the exceeding dryness of the air. Indeed, he remarks on the almost complete absence of all acute disease. The climate differs from that of England in the much greater extremes of heat and cold and in the much greater dryness of both air and soil. Anti-vaccinationists should study his remarks on small-pox and its consequences, especially blindness. 'Small-pox," he says, "is accountable for the destruction of an immense number of eyes, both among children and adults." We congratulate Mr. Schofield on his report and his work, and wish him every success.

SMALL-POX IN BAVARIA.

DR. VON KERCHENSTEINER, one of the leading medical officials in Bavaria, has recently published some details as to the ravages of small-pox in that country during the period from 1871 to 1881. In the first-named year the disease had been introduced from France, and 30,742 persons in Bavaria were attacked, this number representing a proportion of ·68 per cent. of the population. Of the vaccinated patients 13·6 per cent died, and of the revaccinated only 8·2 per cent.; while of the unvaccinated, no less than 60·2 per cent. were carried off by the complaint. The following figures illustrate the results of several years in succession at a later time within the period under review.

	Percentage of deaths of vaccinated persons.	Percentage of deaths of re-vaccinated persons.	Percentage of deaths of un-vaccinated persons.
1877 . .	10·8	8·2	53·1
1878 . .	11·8	8·1	39·5
1879 . .	13·6	—	41·1
1880 . .	12·8	12·2	37·0
1881 . .	10·3	8·1	48·3

CROWDS AT OPEN WINDOWS.

CROWDS at open windows to see processions are fruitful sources of work for the doctors. After hurried gatherings and exhausting waits, which first overheat and then weaken the body, sight-seers take their places at open windows and expose themselves to draughts which they would not on ordinary occasions dare to face. Children, too, are "put out," as it were, to "catch cold." This is what happens whenever there is anything to be seen in the streets, even in November and December. Already the consequences of the procession on Monday last are beginning to make themselves apparent. Why are parents with an average amount of common sense so careless? Why do they not wrap up and clothe their children sufficiently when this peril is to be incurred?

THE NEW CHELMSFORD INFIRMARY.

THERE has been a day of great concord and rejoicing in Chelmsford in spite of a great deal of agricultural distress in the neighbourhood, feelingly alluded to in the speech of the chairman of the proceedings. The occasion was the laying of the foundation stone of a new infirmary and dispensary. According to the local newspapers there was only one omission in the proceedings, that of any allusion to the labours in the past of the honorary medical officers. We willingly believe that this was accidental, but it was not the less conspicuous, and will, we hope, not recur in the greater occasion which is still in the future.

THE MEDICAL SOCIETY OF LONDON.

THE large room of the Medical Society of London was filled to overflowing on Monday evening, Dec. 4th, when Dr. Heneage Gibbes exhibited a large number of specimens of bacteria from various sources. The chief interest centred in the specimens of tubercle bacillus, which were shown as occurring in both bovine and human tubercle, and in the sputa of phthisical patients, the slides being prepared according to the method already described by Dr. Gibbes in these pages (Aug. 5th, 1882). Besides tubercle bacilli the collection included the so-called "typhoid bacillus," several specimens of bacillus anthracis and of the same under cultivation, bacilli from diphtheria and septicæmia, from sheep-pox, from the Welbeck poisoning case, and as a concomitant of putrefaction. Dr. Gibbes read a short paper on the methods of staining employed, and on the localisation of the bacilli in the various forms of tubercle. Messrs. R. and T. Beck, of Cornhill, kindly supplied the microscopes for the evening. The buildings of the Society are being pushed forward at a rapid rate; and it is probable that the large new meeting-room, the need for which was very evident on Monday evening, will be ready for the reception of the Society during the present session. At the meeting on the 11th inst., amongst other communications, Dr. C. Theodore Williams will read the notes of a case of bronchiectasis treated by paracentesis.

MR. ANTHONY TROLLOPE.

SHORTLY after the publication of our last report a decided change for the worse took place in Mr. Anthony Trollope's condition. He had made great progress towards recovery during the week, and there was every hope of a speedy termination of his illness. On Saturday, however, he became drowsy and apathetic, and it was only too evident that further changes were taking place in the structures of the brain. On Sunday he was quite unconscious, and was unable to take nourishment of any kind; the heart's action was feeble and irregular, and it was with difficulty that the strength was maintained by suppositories of peptones, and other means. On Tuesday there was a sudden rise of temperature, and it was found that there was congestion of both lungs. Mr. Trollope died on Wednesday evening at six o'clock, there being no return of consciousness.

EFFECTS OF DIET ON LIABILITY TO INFECTION.

PROFESSOR FESER of Munich has been making experiments on animals with a view to establishing the connexion which exists between diet and liability to infection. In the trials he has made on rats inoculated with the poison of cattle distemper, he demonstrated the fact that the animals which had been fed on vegetable diet were quickly attacked by the disease, while those which had been fed exclusively on meat resisted the effects of the inoculation. In recording this fact a leading journal in connexion with the continental leather trade attributes to the greater amount of vegetable diet in the shape of bread, beer, &c., taken by woolsorters between Saturday and Monday, the greater frequency of cases of outbreak and the aggravation of disease during that period.

"LATE HOURS."

IT is a mistake to both rise early and late take rest. The rising early is good as a habit of life, if it does not mean robbing nature of her opportunity to recruit the exhausted strength of brain and body by prolonging sleep when that necessary luxury is at length enjoyed. There would appear to be some need of remonstrance on this score. The fashion of the day favours early rising and the manly "tub"; but those who rise early have, for the most part, sat up pro-

digiously late, and the tub is chiefly appreciated because it rouses the system, and makes it feel—and feelings are very deceptive—strong and vigorous. This is burning the candle at both ends. If we must sit up half the night, it would be better to sleep half the day than to rise betimes and go in for arduous labour after insufficient rest. Early rising is not good, but harmful, without early resting.

MR. FAWCETT.

WE have received the following authentic particulars of the illness of Mr. Fawcett. The first signs of ill-health revealed themselves on Nov. 23rd. On the 28th the distinguished invalid was seen by Dr. Andrew Clark, when a diphtheritic exudation was discovered on the left tonsil and uvula. The patches disappeared on Dec. 2nd, but returned next day, and lasted for a few days longer, accompanied with slight erysipelas of the face. There were from the very first symptoms calculated to raise suspicions of the presence of typhoid fever—e.g., looseness of the bowels, with typhoid-looking motions. The medical attendants, however, were not in a position to state positively that typhoid existed until Dec. 2nd. The symptoms of both diseases were modified by their co-existence. The enlargement of the cervical glands usual in diphtheria was absent. Especially noteworthy was the irregular form of the enteric symptoms. The pulse never exceeded 104; the temperature, ranging from 102° to 103·8°, at no period of the disease showed the typical typhoid curve; and the nervous disturbance was excessive in proportion to the vascular excitement. Mr. Fawcett cannot yet be said to be out of danger, but we are glad to state that his condition is, at the time of our going to press, reassuring.

M'GILL COLLEGE MEDICAL FACULTY.

AT the commencement of the current session of the above well-known Canadian College, the fiftieth anniversary of its foundation was celebrated. The introductory address was given by Dr. R. P. Howard, Dean of the Faculty, in the course of which he sketched the rise and progress of the university, of which all the medical graduates are Canadians. He gave a history of the first lecturers in the school, and paid a warm tribute of praise to the principal of the university (since 1855), Mr. J. W. Dawson, who had always taken a warm interest in the medical faculty. The main part of his address was, however, devoted to a memoir of the late Dr. G. Campbell, Dean of the Faculty in 1860, who died in Edinburgh when on a visit early in the present year. The *brochure* which contains the address is illustrated by a portrait of the lamented physician, who was as much esteemed by the Canadian people as by the College with which he had been so closely bound. The pamphlet contains also a full report of the speeches delivered at the banquet to celebrate the opening of the fiftieth session.

THE REGISTRATION SYSTEM AND IRREGULAR PRACTICE IN LEEDS.

A JURY, after inquiry into the cause of death of a little girl, aged four years, who had been ill a month and had no other medical attendance than that of an unqualified practitioner named Bowens, found death to have resulted from natural causes, but advised that the facts be brought under the notice of the Registrar-General. The facts which came to light were very serious, and to the effect that Bowens gave a letter about the cause of death which, on being taken to the deputy registrar, was pronounced by him "rather an irregular certificate," but "to save bother" he said he would give a certificate for burial. If registrars and the registration system exist to facilitate funerals and "to save bother," the action of the assistant registrar here is proper, but if not, we can only hope that the Registrar-General will take the recommendation of the jury into very serious consideration.

OLIVER WENDELL HOLMES.

WE learn with mingled feelings of pleasure and regret that Dr. Holmes has resigned the Chair of Anatomy in Harvard University—regret that he has felt it necessary to sever the connexion which has lasted thirty-five years, and which has been alike honourable to himself and beneficial to the medical profession throughout America, and pleasure when we consider the reasons which have led to his retirement. He has resigned in order that he may have more time to devote to literature, and thus increase the debt which we on this side of "the pond" already owe him for many an hour's entertainment. He has done more perhaps than any other contemporary American writer to amuse and instruct us. His poems possess humour, pathos, and grace; and in his prose, in addition to scholarly lore, he displays a minute knowledge of, and keen interest in, the human nature and stirring life around him. Of his novels (as distinguished from the more properly humorous books as the "Autocrat" and "The Professor at the Breakfast-table"), "Elsie Venner" is the most popular in England. The strangeness of the general conception, the unfamiliar hereditary curse, and the common human life through which the heroine steals, make up a novel unique and powerful in character. Another point on which we may congratulate ourselves is that Dr. Holmes writes English.

OBSTETRIC CONTRACTS.

NOTWITHSTANDING some decisions to the contrary, it is very unsafe to assume that where a medical man is engaged to attend an obstetric patient, and is not sent for, he may recover his fee in a County Court. Mr. G. H. Thurston has just failed to do so in the County Court at Barnet. He had been engaged to attend the case, which was expected in the end of August, but did not occur till the 18th of October. This is bad law in our opinion, and worse judgment. It must be supposed that Mr. Thurston's arrangements were restricted for two months by consideration for this patient—a fact which is disregarded in the judgment. We cannot believe that County Court judges who consider what is involved in a medical man making light of obstetric engagements will approve the decision of the judge in Mr. Thurston's case.

THE BRADSHAWE LECTURE AT THE COLLEGE OF SURGEONS.

SIR JAMES PAGET, Bart., late President of the Royal College of Surgeons, will deliver the Bradshawe Lecture, "On some Rare and New Diseases," to be illustrated by the contents of the Museum, on Wednesday, the 13th inst., at 3 o'clock (not 4 o'clock, the usual lecture hour), in the theatre of the College. This lecture was founded by the widow of the late Dr. William Woods Bradshawe, F.R.C.S., sometime the Mayor of Reading, who bequeathed £1000 for that purpose, and a similar amount to the Royal College of Physicians.

SMALL-POX AT THE CAPE.

THE account of the panic at Uitenhage and other places and of an isolated case of an old Kaffir dying, without anyone to "watch" him, creeping out of his hut to die, and then being cremated with his hut by a sanitary deputation, is painful reading. Personal liberty and public business are very lightly regarded. The owners of steamships, especially Messrs. Donald Currie & Co., are coming in for severe censure, and are denounced as the cause of all the cases in the eastern

provinces by acting as carriers of infection from Cape Town. Everything is done, or rather proposed, by vigilance committees. But one thing that would be worth all the rest is very inadequately applied. If half the money that is being spent were applied to the extending and perfecting of vaccination and revaccination the results would be more satisfactory.

SIR THOMAS WATSON.

THE report as to the condition of Sir Thomas Watson is that he still survives and retains consciousness, but with gradually falling temperature and failing pulse. Her Majesty the Queen has telegraphed a kind message of inquiry.

PORRO'S OPERATION.

WE learn that the patient upon whom Dr. Godson performed this operation on November 27th, as noticed in our last issue, has up to the present time progressed uninterruptedly, and there is now every prospect of her recovery. The child is also quite well.

DR. LOCKHART ROBERTSON and Dr. CRICHTON BROWNE, the Lord Chancellor's Visitors in Lunacy, were officially present at the opening of the Royal Courts of Justice by Her Majesty the Queen on the 4th inst. The following members of the profession were also present:—Sir James and Lady Paget, Sir George Burrows, Sir Henry Thompson, Sir William Muir, Mr. Spencer Wells, President of the Royal College of Surgeons, Professor W. H. and Mrs. Flower, Professor Huxley, Professor J. Marshall, and Mr. Francis Mason, President of the London Medical Society.

DR. SAMUEL WHITE THAYER, Emeritus Professor of Anatomy in the University of Vermont, U.S.A., died on the 14th ult., aged sixty-five. In 1854 Dr. Thayer was elected to the chair of the Theory and Practice of Medicine in the university, and was subsequently transferred to the chair of Anatomy. During the war of the Rebellion he was appointed Surgeon-General of Vermont.

WE understand that the late Dr. Peacock has left a bequest sufficient to establish a scholarship in St. Thomas's Hospital medical school, of the value of forty guineas. The scholarship will be tenable for two years on the same terms as those of the "Musgrove Scholarship," and will bear the title of the "Peacock Scholarship."

THE total number of cases of yellow fever at Pensacola, U.S.A., is stated to have been 2330, with 191 deaths—a remarkably low rate of mortality. The epidemic appears to have entirely ceased.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS TO THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

St. Helen's, an urban sanitary district on the south-western limits of the Lancashire coal-fields, and having a population of nearly 60,000, has for many years past exhibited a considerable mortality from fever, the disease in question being almost invariably enteric fever. Locally, this special fatality is in great part attributed to the extent to which the atmosphere is polluted by the chemical works and by heaps of alkali waste, conditions which, it is alleged, cause diseases such as enteric fever to assume a malignant type. Mr. Spear, who has visited the borough on behalf of the Local Government Board, discusses this question; but it is quite evident that the more recent prevalences of fever do not bear out the contention, a large number of mild attacks having occurred during their course. On the other hand, conditions well known to affect health injuriously, and to be either directly or indirectly associated with the prevalence of enteric fever, prevail to an extent which must be regarded as amply sufficing to explain the mortality which came to be inquired into. The house accommodation of the working classes, who almost exclusively make up the population, is generally unsatisfactory; the older property is badly built on insufficient space, and the newer property has suffered much at the hands of speculative builders. The midden-privies are of the most objectionable sort, and they consist for the most part of deep, wet, and foul pits; scavenging, too, is neglected. The main sewer is a brook, many of the tributary sewers are defective and are admittedly leaky throughout their entire length, the sub-soil thus becoming polluted with filth. Cellars and basement rooms are at times provided with sinks communicating directly with the sewers, and although disconnexion is now insisted on, yet the local drainage arrangements admit of the yards being more or less flooded with slop water. Fortunately a good public water service is available and the shallow wells in use are but few in number. In short, it is quite evident that so many ordinary causes of preventable disease obtain in St. Helen's that the corporation has ample work in prospect for many years to come. There are certain local difficulties which have hitherto interfered with the adoption of any proper system of sewage disposal, and the absence of such a system has in its turn hindered the construction of proper sewers in the town. But apart from these works there is much that can be done to improve the health of the district, and it is specially important that the conditions of house-drainage and of excrement and refuse disposal should be dealt with in such a way as to ensure their permanent improvement. This end is specially held in view in the recommendations which are addressed to the sanitary authority at the end of the official report.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Birkenhead.—According to Mr. Vacher's annual report for 1881 the population of this borough at the last census was 84,006; the birth-rate has been 36·9 and the death-rate 19·7 per 1000. The latter rate, though falling short of that which sanitary administration, even in large boroughs, must aim at, is unquestionably satisfactory, and compares favourably with that of the large towns and cities of England. The infantile mortality of a district has always been regarded as one of the best tests of its local sanitary circumstances, and it is, hence, further satisfactory to note that whereas the mortality under one year of age was 14·0 per cent. for the large towns and cities, it was in the somewhat populous borough of Birkenhead only 12·8—namely, less than that for England and Wales as a whole, the rate for that portion of the United Kingdom being 13·0 per cent. Two outbreaks of typhus are discussed by Mr. Vacher, and, in connexion with these, he adverts, amongst other things, to the need both for notification of infectious diseases and for the power to remove patients to hospitals without the consent of their friends, whenever such isolation as will prevent the spread of infection cannot be carried out. The first want has now been met by the Birkenhead Corporation Act, 1881; the latter can only be fully met by fresh legislation, and it becomes doubtful how far the public are prepared to see Parliament grant such powers, however desirable they may be in the interests of public health. Some magistrates have, in isolated cases, decided that since the Public Health Act, 1875, has reference to the health of the community, rather than to the welfare of the individual, action can be taken under section 124 in the sense desired by Mr. Vacher, and we are not aware that when this has been done any appeal has been made against the decision. The borough fever hospital, one of the earliest provided, continues to do excellent work, and with a view of favouring its further usefulness, the sanitary authority very wisely allow any medical practitioner sending in cases to continue his attendance upon them. Delay, however, still occurs in effecting the removal of the sick, and extension of disease is necessarily the result. The tabular statements appended to the report show that a large amount of sanitary work is steadily in progress in the borough, and that Mr. Vacher's department maintains a

vigilant eye over all that pertains to the health of the inhabitants.

Hull.—During the year 1881 the deaths in the borough of Hull amounted to 23 per 1000, and the births to an annual rate of 36 per 1000, the population being estimated at 155,160. The deaths from zymotic diseases were exceptionally numerous, as many as 934 being registered as due to one or other of the seven principal zymotics, or at the high rate of 6 per 1000. This large death-rate was in the main caused by the occurrence of 682 scarlet fever deaths, as opposed to an annual average for the preceding fourteen years of 152 such deaths. The extensive epidemic which prevailed was recently reported on by Dr. Airy of the Local Government Board, and the principal facts concerning it are recapitulated by Dr. Mason in his annual report, special stress being laid on the fact that in the absence of a system of compulsory notification of infectious diseases the sanitary authority of a district like Hull is practically powerless to prevent the extension of such a disease as scarlet fever. In dealing with the subject of infantile diarrhœa Dr. Mason refers, amongst other points, to such questions as high temperature and so-called "atmospheric conditions," but it is perfectly evident that circumstances such as these are not alone responsible for the epidemic prevalence of this disease. We are informed that the frequent removal of night soil, the flushing and ventilation of the sewers and drains, and the cleansing of gullies, have been attended to by the sanitary authority; but other removable conditions of this infantile scourge must certainly exist, and we hope that before long something much more definite may be learnt as to the conditions leading to its causation, both in Hull and elsewhere. Efforts are evidently being made in this direction by Dr. Mason, who has both compiled an important series of tables localising the fatal attacks of this disease as well as other preventable ones, and prepared a map in which the various deaths are recorded by dots, differently coloured, according to the nature of the disease.

Wolverhampton.—In presenting his annual report for 1881, Mr. J. H. Love congratulates the town on its rapid progress from one of the most unhealthy districts in the kingdom to a position of average healthiness. Under the operation of the Artisans' Dwellings Improvement Act many fever dens have been swept away, and wide streets have replaced narrow and ill-ventilated alleys; a public mortuary has been provided; deep ash-pits have been filled in; many privies have been converted into pan-closets; improvement in the scavenging of house refuse is in progress; and the erection of a hospital for infectious diseases is about to carried out. But a beginning has only been made in the removal of dwellings and lanes, which by obstructing light and proper movement of air, are still a grave cause of unhealthiness; typhoid fever is traced to insanitary surroundings; and infantile diarrhœa is an important element in the death-rate. The total death-rate for the borough is 21 per 1000 living, and phthisis, with certain other lung affections, contribute to it in a marked degree, the rate of mortality depending very largely, as is shown in a carefully prepared table, on the prevailing meteorological conditions. In this connexion, it must, however, be noted that Wolverhampton lies on a clay subsoil, and that it is peculiarly exposed to the influence of east winds.

Presteigne.—We regret that by error we attributed the report on Presteigne to Dr. Covernton. Presteigne is within that portion of the Knighton rural district for which Dr. R. Harding acts as medical officer of health, and the report was prepared by him.

The enactment contained in the 90th section of the Public Health Act, 1875—that, namely, which deals with houses let in lodgings—is declared by the Local Government Board to be in force within the city of Gloucester.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 5729 births and 3615 deaths were registered during the week ending 2nd inst. The annual death-rate in these towns, which had steadily increased in the four preceding weeks, from 21·3 to 24·2 per 1000, fell again last week to 22·3. During the first nine weeks of the current quarter the death-rate in these towns averaged 21·7 per 1000, against 22·0 and 21·2 in the corresponding quarters of 1880 and 1881. The lowest death-rates in these towns last week were 14·7 in Bolton, 14·9 in Portsmouth, and 17·4 in Leicester. The rates in the other towns ranged upwards to 27·9 in Halifax, 28·1 in Liverpool, and 28·6 in Newcastle-upon-Tyne. The deaths referred to the principal zymotic diseases in the twenty-eight towns declined to 427, and were fewer than in any previous week of this year; 115 resulted from measles, 111 from scarlet fever, 85 from "fever" (principally enteric), 49 from whooping-cough, 35 from diarrhœa, 22 from diphtheria, and 10 from small-pox. The lowest death-rates from these zymotic diseases occurred in Bradford and Norwich, and the highest in Sunderland, Cardiff, and Halifax. Measles caused the highest death-rates in Cardiff and Sunderland; scarlet fever in Oldham, Halifax, and Sheffield; whooping-cough in Halifax and Preston; and "fever" in Portsmouth, Halifax, Newcastle-upon-Tyne, and Liverpool. No fewer than 18 of the 22 deaths from diphtheria in the twenty-eight towns occurred in London. Small-pox caused 5 deaths in London, 4 in Newcastle-upon-Tyne, and 1 in Nottingham. The number of small-pox patients in the metropolitan asylum hospitals, which had been 73 and 68 on the two preceding Saturdays, was 70 at the end of last week; 15 new cases of small-pox were admitted to these hospitals during the week, against 16 and 7 in the two previous weeks. The deaths referred to diseases of the respiratory organs in London, which had been 330, 345, and 411 in the three preceding weeks, further rose to 424 last week; this number was, however, 69 below the corrected weekly average. The causes of 109, or 3·0 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Norwich, Plymouth, Derby, and Blackburn. The proportions of uncertified deaths were largest in Liverpool, Salford, Oldham, Halifax, and Sunderland.

HEALTH OF SCOTCH TOWNS.

The annual death-rate in the eight Scotch towns, which had been equal to 25·8 and 24·3 per 1000 in the two preceding weeks, was 24·8 in the week ending the 2nd inst., and exceeded by 2·0 the mean rate last week in the twenty-eight English towns. The deaths referred to the principal zymotic diseases in these Scotch towns, which had been 98 and 78 in the two previous weeks, rose again to 88 last week, and were equal to an annual rate of 3·8 per 1000—1·2 above the rate from the same diseases in the English towns. The fatal cases of whooping-cough numbered 21 last week, of which 10 occurred in Glasgow, and 3 both in Dundee and Aberdeen. The 19 deaths from diphtheria were within 1 of the number in the previous week, and included 11 in Glasgow and 3 in Dundee. The 16 deaths attributed to diarrhœa were 6 above the number in the corresponding week of last year. The 12 deaths referred to "fever" exceeded those in the previous week by 6; 7 occurred in Glasgow, and 2 in Leith. The fatal cases of scarlet fever, which had been 18 in the previous week, fell to 12 last week, of which 8 were returned in Glasgow, and 2 both in Edinburgh and Paisley. Of the 8 deaths from measles 7 occurred in Glasgow. The deaths referred to acute diseases of the lungs in the eight towns, which had been 172 and 167 in the two preceding weeks, further declined to 139 last week, but were 36 below the number in the corresponding week of last year. The causes of 118, or 23 per cent., of the deaths registered in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The annual rate of mortality in Dublin, which had been equal to 26·1 and 29·2 per 1000 in the two preceding weeks, declined to 25·6 in the week ending the 2nd inst. During the first nine weeks, however, of the current quarter the death-rate in the city averaged 24·3 per 1000, against 20·5 in London and 19·3 in Edinburgh. The 171 deaths in Dublin last week showed a decline of 24 from the number in the previous week, and included 14 which were referred to the principal zymotic diseases, against 11 and 14 in the two previous weeks. These 14 deaths included 6 which were referred to "fever," 5 to whooping-cough, 2 to diphtheria, 1 to diarrhœa, and not one either to small-pox, measles, or scarlet fever. The death-rate from these zymotic diseases was equal to 2·1 per 1000, while the rate from the same diseases last week was 2·9 in London and 1·6 in Edinburgh. The 6 deaths referred to "fever," in Dublin last

week corresponded with the number in the previous week, and were equal to a rate considerably exceeding the mean rates last week in the principal English and Scotch towns. The 5 deaths from whooping-cough showed a further increase upon recent weekly numbers. The 2 fatal cases of diphtheria raised the number recorded during the past four weeks to 4. The deaths of infants showed a marked decline last week, whereas those of elderly persons showed a further increase.

HEALTH MATTERS GENERALLY AT HOME AND ABROAD.

SANITATION AT DETROIT, U.S.A.

The first annual report issued by the Board of Health for the city of Detroit, in the State of Michigan, U.S.A., has been prepared with much care by Dr. O. W. Wright, the health officer. A description is given of the laws creating the health department, and of the organisation for administrative work. The sewerage and the system of house-drainage are discussed and the needed remedial measures are pointed out. The slaughterhouses come in for a large share of condemnation, and the necessity for a public abattoir is shown. In dealing with the subject of the prevention of epidemic diseases, we note that the inhabitants of the city are likely to meet with much the same difficulties as have arisen in our own metropolis since the publication of the report on the Influence of the Fulham Small-pox Hospital. Detroit sends its small-pox patients to Grosse Point, and, apart from the fear of a spread of infection during the transit there, it appears that the inhabitants of that suburb are so hostile to the building as to have threatened to destroy it by fire. In view of these circumstances Dr. Wright makes a suggestion as to the construction in the city of a "Flame-Ventilated Small-pox Hospital," in some respects similar to the proposals which we considered in an article in last week's issue. We doubt, however, whether, in view of the fact that the windows are to be made to open, Dr. Wright's anticipations as to the whole current of ward-air being carried up a shaft fitted with gas jets will be realised. The report also contains two interesting chapters on the ice and milk supply of the city, and on the possibility of infection being conveyed by means of these two vehicles. Indeed, if the first issue may be taken as a sample of those which are to follow, there is every prospect that a new and valuable series of documents relating to questions of public health has been inaugurated.

THE WATER-SUPPLY OF MELBOURNE.

Works of considerable magnitude are in progress with a view to an improvement in the water-supply of Melbourne. When they are completed the spring waters from the Plenty ranges will be conveyed direct to that city by means of a series of aqueducts and altered watercourses, which will admit of a daily flow of about 100,000,000 gallons. At present much of the water that will become available for domestic purposes becomes seriously polluted whilst passing through a flat, low-lying country, but as soon as labour can be spared from the works in progress at Wallaby creek in the mountains, the water will, on joining the main bed of the Plenty river, be diverted by means of a dam into a clear water-channel over four miles in length, and exhibiting several artificial cascades in its course, and from this the supply to the water-mains will pass. Our colonial brethren are carrying out a work which will largely tend to the future health and prosperity of their city, and in its execution they are availing themselves of the experience which has been obtained in connexion with similar works both in their own and other countries. The possibility of a water famine, such as has been anticipated in the past, will soon be effectually removed, and, judging from a description of the works, the future supply will be one to which, so far as its source is concerned, no suspicion of unwholesomeness can be attached.

THE ARTISANS' DWELLINGS ACT AT ABERDEEN.

Dr. Beveridge, chairman of the Public Health Committee, has given notice that at the next meeting of the Town Council he will move "That it be remitted to the Public Health Committee to inquire into the expediency of applying the provisions of the Artisans' Dwellings Improvements (Scotland) Act to any portion of the city, and to report.

THE SERVICES.

ARMY MEDICAL DEPARTMENT.—Surgeon-Major William Ashton, M.B., to be Brigade Surgeon, vice G. L. Hinde, retired upon temporary half-pay; Surgeon-Major George Whitla to be Brigade Surgeon, vice N. Ffolliott, granted retired pay; Surgeon-Major Edward Footner, M.B., has been granted retired pay with the honorary rank of Brigade Surgeon; Surgeon-Major Kenneth William Cumming, M.D., has been granted retired pay with the honorary rank of Brigade Surgeon.

ARTILLERY VOLUNTEERS.—1st Fifeshire: William Chalmers-Cowan, gent., to be Acting Surgeon.—2nd Middlesex: Surgeon John Wickham Barnes is granted the honorary rank of Surgeon-Major.—1st Norfolk: George Henry Cressey, gent., to be Acting Surgeon.

RIFLE VOLUNTEERS.—1st Isle of Wight: Surgeon George Henry Roqué Dabbs, M.D.—22nd Lancashire: Robert Lancelot Sparrow, Gent., to be Acting Surgeon.—2nd Middlesex (Central London Rangers): Acting Surgeon James Hill, M.D., resigns his appointment.—3rd Volunteer Battalion, the Prince Albert's (Somersetshire Light Infantry): Acting Surgeon Frederick James Brennand resigns his appointment.

ADMIRALTY.—The following appointments have been made:—Surgeon Alfred T. Corrie to the *Pembroke* (complement incomplete); Surgeon John O'Callaghan to the *Cambridge*, vice Alfred T. Corrie; John M. Phillips, M.D., has been appointed Surgeon and Agent at St. Dogmael's and Aberforth, vice Mr. Henry C. Noott, deceased; Surgeon Edward H. Williams, to the *Asia*, vice James Bradley (appointment of Surgeon Charles W. Sharples cancelled); Fleet Surgeon William D. Longfield, to the *Himalaya*; Fleet Surgeon Samuel Bamfield, to the *Indus*, vice Longfield; Staff Surgeon Herbert M. Ellis, to the *Pegasus*; Staff Surgeon John Lambert, to the *Lion*, vice Bamfield; Surgeon Edward R. Mulock, to the *Himalaya*; Surgeon Henry A. W. Richardson, to the Devonport Dockyard for service at Keyham, vice Mulock.

GLASGOW ROYAL INFIRMARY SCHOOL OF MEDICINE.

SIX years ago the managers of the Glasgow Royal Infirmary, considering a medical school to be essential to the success and proper utilisation of the institution under their care, obtained from Government a supplementary charter, under which they appointed lecturers in the several subjects of the medical curriculum. The accommodation at first provided for the lecturers was of a temporary nature and far from satisfactory, and as the school increased in numbers the managers felt justified in appealing to the public for funds. Donations were obtained of sufficient amount to render possible the erection of buildings worthy of the infirmary and the city. These are now completed. The buildings are of stone, one in the Italian style of architecture and one situated behind the infirmary proper. The plans were very carefully prepared to meet the requirements of scientific medical teaching. The anatomical department is particularly well arranged. The dissecting-room measures 67 ft. by 25 ft., and is 24 ft. high; it is entirely lighted from the north, the roof being of the form known as the "spinning factory roof," there being also long side windows. The roof has an open ridge, covered with perforated zinc, which secures very free ventilation. Around the room are arranged desks, in which are placed mounted anatomical specimens, in order that students may study them at leisure. Opening out of the dissecting-room is a lavatory, supplied with hot and cold water, and fitted with wash-basins, with marble tops, boxes for appliances, and other conveniences, so as to render the students as comfortable as possible. The anatomical lecture-room is seated for 150 students, the seats being arranged in a semicircle; it is lighted chiefly from the roof, but also from the north and east. The lighting and heating are especially satisfactory in this room. The anatomical museum has also both roof and side light; it is lined with cases with glass fronts, which are well stocked with models and the like, and in the centre of the floor is a large counter case, on which are some fine wax casts. The osteology-room is furnished

with baize-covered tables for the students to sit at and read, and on the tables are fixed glass cases containing bones on which the attachment of muscles is clearly displayed. For the study of physiology an excellent laboratory and convenient lecture-room are provided, and by a simple arrangement of the partition between these they can be thrown into one, so as to make the whole of the side light available for microscopic work. The laboratory is supplied with an excellent collection of physiological apparatus, part of it being purchased by means of a donation from Dr. Henry Muirhead, the rest being the property of the lecturer. The chemistry department consists of a well-lighted and admirably fitted up lecture-room, the table having been specially constructed so as to give the lecturer a free supply of gas and water. Adjoining this is a laboratory capable of accommodating about forty students; it is quite a model of what such an establishment should be, the arrangements for gas, water, light, and test appliances being the best that could be devised. A new feature (as compared with other medical schools in this country) is a toxicological laboratory for teaching the testing of poisons. Much thought has been expended by the lecturer on medical jurisprudence in the arrangement of this department, and there is no doubt it will prove of much use as an aid to the study of an important branch of medical education. Near this is a room, at present unoccupied, but intended for a surgical museum and work-room in connexion with the surgery lectureship. A large and comfortable lecture-room for the other classes is situated on the ground floor, and lighted by an ingenious arrangement of roof and wall light, so as to secure a steady light without glare. Private rooms for the lecturers have been provided, and a private lavatory supplied with hot and cold water. One of the features of the school is a students' room, with lavatory attached; here, in the intervals of the classes, the students may smoke, read, or chat. It will no doubt be much appreciated by those for whose comfort it is intended. These buildings were formally opened and inaugurated on Wednesday evening, Nov. 1st, by a brilliant conversazione, which was very well attended by the medical profession in Glasgow and neighbourhood.

Correspondence.

"Audi alteram partem."

THE OPPOSITION OF THE SCOTTISH UNIVERSITIES TO MEDICAL LEGISLATION.

To the Editor of THE LANCET.

SIR,—Will you kindly publish the following letter of Dr. Gairdner's, in reference to his attitude towards proposals for legislation for the creation of three conjoint boards, in place of the nineteen existing bodies in Schedule A of the Medical Act.

Yours truly,

Highbury, December, 1882. J. G. GLOVER.

"Dear Dr. Glover,—In the only detailed report I have seen of the recent deputation from the British Medical Association to Lord Carlingford and Mr. Mundella (*Scotsman*, Nov. 23rd), I find you referring to my name along with that of Professor Turner, and it would almost appear as if our supposed assent to the principle of a joint board was to be made a starting-point for the further assumption that the opinion of Scotland, or of the Scottish universities, might be reckoned upon in future as favourable to some modification of that principle. Were it not for this suggestion, which appears both in your own remarks and in the leading article in THE LANCET of to-day, I might be content to leave Professor Turner's opinion to be read in his separate memorandum (F) subjoined to the report of the Royal Commission, and my own in my evidence, which you will find not at all in accordance with the views you attribute to me, see especially Nos. 4759–62, 4765–68, 4770–86. It is not my object at present to argue the matter; but as Lord Carlingford and Mr. Mundella, as well as others, may have been misled, I will ask you to secure the insertion of this letter, along with any report that may appear in THE LANCET of the proceedings of the deputation.

"I am, Sir, yours, &c.,

"Nov. 25th, 1882." "W. T. GAIRDNER.

*** The subject of Dr. Gairdner's letter is noticed in another column.—ED. L.

"PICRIC ACID AND SUGAR TESTING."

To the Editor of THE LANCET.

SIR,—It would be a waste of my time and of your space to discuss the question whether my discovery or Dr. Pavy's criticism bears the impress of having been the more "hastily communicated." Upon this comparatively unimportant question the following reply to Dr. Pavy's letter may perhaps assist your readers to form their own judgment.

Dr. Pavy's statement of his belief that it "would be an absolute misfortune for a more sensitive test than the cupric test to be introduced into general use," would have appeared to me quite unintelligible if I had not lately had the benefit of a few minutes' conversation with him, during which he expressed his fear that a test so sensitive as to reveal the presence of sugar in normal urine would cause practitioners to mistake a physiological condition for diabetes. But surely the true way to obviate so serious an error is not to endeavour to keep the profession in ignorance of the easily demonstrated fact that sugar is a normal constituent of the urine; but to make it generally known, and to supply them with the simplest and surest means of verifying it for themselves. But, says Dr. Pavy, the alkaline sulphides cause the same reaction as grape sugar with picric acid and potash. Granted.

The question, then, is, Are alkaline sulphides always, or often, present in normal urine? There is no known test for sugar which may not give a similar reaction with some other material than sugar. Dr. Pavy, in his treatise on Diabetes (p. 16) states that chloroform, uric acid, and cellulose may cause a precipitate of suboxide in Fehling's cupric solution. To be forewarned of these possible fallacies is to be forearmed against them. But Dr. Pavy, in his letter, goes on to state that "sulphides of ammonium and potassium are capable of being generated by boiling urine with potash." This, so far as regards normal urine, I am told by much better chemists than myself, is an improbability, and cannot be accepted on the mere *ipse dixit* even of so great an authority as Dr. Pavy. He further states "that a sulphide is actually produced by the action of potash upon healthy urine is shown by the well-known fallacy that Moore's or the liquor potassæ test is open to from the presence of a little lead." I confess that this statement surprises me not a little. It has often happened to me in boiling *albuminous* urine with liquor potassæ to find the liquid darkened, and a subsequent precipitate of sulphide of lead, the sulphur being a constituent part of the albumen and the lead an impurity of the potash; but I have never observed this change to occur in *healthy* urine; and since reading Dr. Pavy's letter I have repeated the experiment on normal urine with a negative result, while adding a solution of lead to the mixture.[1]

I have also repeated Dr. Pavy's experiment, which consists in forming an alkaline sulphide by boiling white wool with caustic potash. The liquid gives the same colour as grape sugar with picric acid. The addition of equal parts of this solution to healthy urine caused no appreciable change in the reaction with picric acid and potash. Then the question arises if a sulphide exists in the urine in a state to cause the reaction with picric acid, and so to interfere with the test for sugar, can the sulphide be detected by any other test? Obviously it can. On adding a few drops of the above-mentioned white wool product to healthy urine, and boiling with the addition of a minute quantity of lead solution, the mixture was soon blackened by the resulting plumbic sulphide. Again, on adding a few drops of Fehling's cupric solution to the mixture of the sulphide from white wool with normal urine, there was an abundant precipitate of cupric sulphide. The conclusion, then, is that normal urine contains no sulphides, nor any material convertible into sulphides by boiling with caustic potash, and that if from any exceptional condition sulphides are present, they may readily be detected and separated by well-known and very simple methods.

In testing for sugar in albuminous urine, the albumen may readily be removed by boiling and subsequent filtration before applying the picric acid and potash test. That this pre-

[1] Dr. Wm. Roberts says: "It was never found that liquor potassæ containing lead produced a dark-brown colouration with non-albuminous urines, provided, of course, that they were sugar free" (A Practical Treatise on Urinary and Renal Diseases, 2nd edition, p. 178).

liminary treatment is sometimes necessary in testing for sugar in albuminous urine, even by Fehling's solution, is stated by an eminent writer, whose authority will not be questioned by Dr. Pavy.[2] No one who is acquainted with Dr. Pavy's ammoniated cupric test can doubt that it is an exact and admirable method of quantitative analysis; but it requires a more complicated apparatus and a greater amount of manipulative skill than are possessed by the majority of practitioners, who would gladly avail themselves of some simpler method, which, even if it were less scientifically accurate, might for every-day use be of more practical value. Such a quantitative test, notwithstanding Dr. Pavy's regretfully expressed unfavourable predictions, will probably result from the "happy accident" before referred to.

My son having had his attention directed to the question of alkaline sulphides in normal urine, has made some experiments, the results of which are recorded in the following letter.

I am, Sir, yours faithfully,

Savile-row, Dec. 5th, 1882. GEORGE JOHNSON.

*** Want of space compels us to hold over the letter of Mr. Stillingfleet Johnson, referred to above.—ED. L.

PHTHISIS, ITS ETIOLOGY AND TREATMENT.

To the Editor of THE LANCET.

SIR,—May I beg you will have the kindness to afford me sufficient space in THE LANCET to make a few remarks on a form of treatment of phthisis which has suggested itself to me from the start-point of the researches of R. Koch of Berlin, in whose hands the experimental method has resulted in proving that tuberculosis is, in reality, a parasitic disease of the internal animal organs, and that the parasite is a bacillus distinguishable from all other bacilli by its microphytic and other features. In his letter to *The Times* of April 22nd last, the vast importance of this discovery was fully illustrated in his usual felicitous manner by Professor Tyndall; and reflecting on this discovery, and reasoning from analogy, the thought occurred to me that a means which in my hands had been found of signal advantage in the treatment of leprosy in India might, assuming the truth of Koch's discovery, be equally useful if applied to that of tubercle; for I had many years ago ceased to entertain the least doubt that the *fons et origo* of leprosy was a microphytic one, and therefore to be reached by a means having for its object the destruction of that low form of organic life. The space to which I am limited here will not admit of more than a brief *résumé* of the views I advanced in my communication to *The Times* of June 8th. Speaking of the light thus thrown on the intimate nature of tuberculosis through Koch's painstaking researches, and of the "enormous superficial unlikeness," urged by Professor Tyndall, that existed between the eruptive diseases and tuberculosis, I endeavoured to enforce the view that, although such a dissimilarity did appear great, it was not in reality nearly so marked as that which existed between them and leprosy—a disease which I affirmed must be included in a like category—dependent, like them, on the growth within the animal body of a disease-producing bacillus. Hence I was led to suggest that a means which I had found of signal efficacy in the treatment of leprosy should be had recourse to in that of the kindred malady tuberculosis, the agent employed being carbolic acid in intimate union with the vapour of water at a high temperature. Thus employed the acid is, so to speak, atomised, losing thereby much of its irritant properties, and being brought into contact with the body of the patient, confined in a suitable vapour-proof apparatus, cutaneous absorption necessarily follows, thus saturating every tissue of the body with an agent in no way injurious to life when thus employed, though destructive of the microphytic life from which the disease has its source. Were the treatment of disease by the cutaneous absorption of medicinal agents a novel suggestion, or one involving the negation of physiological law, valid objection might well be taken against its application to that of tuberculosis. But it is not so; other forms of disease of a severe and an intractable type have been, and still are, successfully treated through the medium of cutaneous absorption.

Coming, then, to the subject I had in view in this communication, it occurred to me, as the outcome of the thought I have given to Koch's discovery, that seeing it has now been proved that the bacillus of tubercle is not a mere epiphenomenon of tubercle, but its *vera causa*, one cannot fail to see in it the true source of those infective materials whose existence has hitherto been assumed by pathologists, and which, disseminated by means of the blood and lymph streams, call into being those structural lesions which characterise tubercle as occurring in man and the lower animals. In the presence therefore of such conclusive evidence, is it unreasonable, I would ask, to anticipate that, should the resources of nature and art, as now known to us, fail to supply us with an agent possessing properties adapted to the object of reaching and destroying the microphytic sources of tuberculosis in the deep-seated tissues of the body, such an agent may not yet be brought to light? That in carbolic acid we possess such an agent in the treatment of leprosy, it has been my endeavour to show, whilst at the same time suggesting its possible applicability to that of tubercle. But are our existing resources really so meagre as to leave us destitute of other therapeutic means fitted to subserve the teaching of pathology? Without presuming to answer such a question in the affirmative, it is yet incumbent on me to submit to the attention of the profession a means which I would suggest is worthy of an extended trial—I mean salicin. Our knowledge of the action of this medicinal agent on the animal body, and of its reactions in disease, remains much as it was when communicated to the profession through the researches of Senator, Lehmann, and Miller. No doubt, in more recent years, additional light has been let in on the subject by other workers whose conclusions on the *rationale* of the action of salicin are, I presume to think, certainly suggestive of its being made applicable as a curative means to that family of diseases whose intimate nature and dependence on pathogenic germs the experimental method has placed beyond the reach of cavil or doubt. It is not in salicin, in its simple state, that such a result can be looked for, but in those changes which it most assuredly undergoes while circulating in the blood and lymph streams, where, subjected to the influences of the animal chemistry, it is transformed into agents whose destructive energy on microphytic life none can question. That the resultant of those changes is an acid body endowed with such qualities, abundant proof is not far to seek, though this is not the place to adduce it. Till very recently it was generally believed that this acid was salicylic—a view which is no longer tenable if it be proved, as very recently affirmed by Dr. Stewart of Edinburgh, and resting on experiments made by himself, that the acid is, in reality, the carbolic. Let this be as it may, be it carbolic or salicylic acid, both agents really belong to a like category, and are both equally available in the treatment of disease of microphytic origin—the former by the method suggested in my letter to *The Times*, the latter by the internal use of salicin, both agents leading to a like result—the destruction of pathogenic germs. But it is in salicin alone, and not in its compounds, that we must look for the realisation of this object—in its compounds no doubt, but only such as are fashioned in nature's laboratory; and not in the chemist's. Because—and if space were permitted to me here it would be easy to show that the salicylates—comporting themselves as other neutral organic salts, undergo changes in the gastric fluids which involve the destruction of the specific properties of the acid base, while, at the same time, often reacting injuriously on the system by calling into existence symptoms which at times have led to fatal consequences. And, further, it is to be remembered that the success of the treatment is contingent alone on the persistent and the uninterrupted use of the salicin; conditions which will be the more easily fulfilled since experiments have shown, notably those of Dr. Sydney Ringer, that, other things being equal, this substance can be taken in indefinite quantities and without inconvenience, which would be impossible in the case of the salicylates, even were they much less irritating than experience has shown them to be. The use of salicin must therefore be persistent and continuous in order to balance, so to speak, the equally constant elimination by the kidneys of the compound acids which it forms in the blood and lymph streams; and this, not for the purpose of

[2] The Nature and Treatment of Diabetes, by F. W. Pavy, M.D., F.R.S., 2nd edition, p. 17.

effecting tissue changes, but for that of destroying the organisms which are the source of those changes.

Let me conclude with the following brief record of a case of tubercular phthisis which has been subjected to the salicin treatment, that of a young man twenty-two years of age, in whom the disease had passed into its second stage when I first saw him a little over two months ago. Then the upper third of the left lung was involved in tubercular disorganisation, while in the apex of the right and subclavian region disease was present and seen in the dulness, increased vocal resonance, prolonged expiratory murmurs, and the compound râles never absent in like cases. For upwards of six weeks the salicin has been persistently used in association with phosphate of lime, with the result that now all disease has quite disappeared from the right lung, while the improvement in the left has been most gratifying. The cough, dyspnœa, and expectoration of mucopus have lost much of their former force, and he can now take exercise without being troubled with his former distressing dyspnœa. He sleeps well, there are no night-sweats, and his appetite is good. A week after commencing the salicin he increased 5 lb. in weight, and he is now stouter, stronger, and looking better than before he became the subject of disease. I need scarcely add that the usual auxiliary means were employed—cod-liver oil, medicated inhalations, &c.

I am, Sir, yours truly,

WILLIAM JOHNSTON, M.D.,
Surgeon-General.

Northwich, Cheshire, Nov. 10th, 1882.

BORACIC ACID IN DIPHTHERIA.

To the Editor of THE LANCET.

SIR,—I find in the report of the Clinical Society, published in THE LANCET of November 18th, a record by Dr. Goodhart, of six cases of diphtheria treated by the local application of borax or boracic acid, with an amount of success which had not as yet been established, as far as he knew. Dr. Goodhart says "both borax and boracic acid have been occasionally in use as a topical application in diphtheria, doubtless, for a long time, but not, so far as is known, with any decided success." I regret to have to challenge Dr. Goodhart's statement as to the success of the remedy, and must refer him to my communication which appeared in THE LANCET of February 15th in this year, where I advocated the use of boracic acid as a specific in diphtheria, when resorted to in the early stages of the disease. During the past ten years I had exceptional opportunities of watching its effects in over a hundred cases of diphtheria, and more especially during the epidemic which occurred some few years ago in this district, and which the Editor of THE LANCET must well remember from the controversy we then had as to the number of deaths which occurred within the district. Upon that occasion I treated seventeen cases during one week with the boracic acid application—all recovered; and throughout the epidemic I lost one only—namely, a child four years old, who dropped dead whilst playing with its toys in bed some few days after all the symptoms of the disease had disappeared. During the same epidemic ten children of various ages died in the district, none of whom had been treated upon my plan. So great has been the success of the boracic acid treatment in diphtheria in this neighbourhood, that it is as well known as Fowler's solution is for ague; and I can safely state that there is more boracic acid used medicinally in this part of the country than in any county in England. Not that we have been troubled for some long time past with diphtheria, but the remedy is so well known that upon the advent of throat affection, irrespective of its nature, the public immediately resort to it.

Dr. Goodhart speaks of the application "loosening, dissolving, and preventing the reformation of membrane." From repeated experiments with the membrane placed in solutions of various strengths of boracic acid and glycerine at 100° F., I have not found any sign of its being dissolved after exposure to its action for twenty-four hours, therefore I venture to substitute the term detach for dissolve, used by Dr. Goodhart.

I am, Sir, yours, &c.,

T. D. HARRIES, F.R.C.S. Eng. (Exam.)

Aberystwith, Nov. 23th, 1882.

"DEATHS AFTER ABDOMINAL OPERATIONS FROM HEART-CLOT."

To the Editor of THE LANCET.

SIR,—I have to thank a number of correspondents for suggestions and references, particularly Dr. Neale (author of the valuable "Digest"), for the only one which seems at present likely to be of practical use. I cannot, in the compass of a letter, enter into the question raised by Mr. Knowsley Thornton, nor do I think it necessary, for my recently published statistics show that abdominal operations do far better without Listerism than with it. Mr. Thornton's statements that the deaths of my cases were septic has no foundation whatever, and even if it had, when I turn to Mr. Wells's recently published books, as I was asked to do by Mr. Thornton, I find this remarkable contradiction of Mr. Thornton's assertion (at p. 224): "They [Lister's antiseptic plans] certainly have not brought me to the point of seeing no deaths from septicæmia, as promised by some of their enthusiastic promoters, nor have they advanced my success in operating beyond what was attained without it." With this sentence I entirely agree (save in its grammatical inaccuracy), and I think Mr. Thornton now stands alone in opposition to it. The experience of everyone, operators as well as patients, is that carbolic acid, even in very small doses, is very dangerous for feeble kidneys. I have heard that Mr. Thornton's own experience has been unfortunate in this direction. The form of death I see in these kidney cases is altogether different from the deaths hitherto recognised as occurring from septic poisoning, and I am not in the least prepared to accept Mr. Thornton's new device of "septic intoxication"; and his statement that I am afraid to admit a death from septicæmia is not correct, for, most unfortunately, I am undergoing this distressing experience as I write.

In conclusion, let me ask Mr. Thornton one question: Why is it that, with all the blessings of Listerism, operations are shirked in London? The patients come here, and are operated upon successfully without it. He is already in possession of the identification of a case of a huge and rapidly growing uterine myoma, which was under his own care in the Samaritan Hospital, the risk of operating upon which he declined. The patient came here and had the operation performed successfully, just nine weeks ago, and has gone home perfectly well; and this is by no means a solitary instance. If Listerism is such a royal road to surgical success, surely such incidents ought to occur in the converse way; it should be that I should refuse to do them, not using Listerism, and that Mr. Thornton should succeed with it.

I am, Sir, yours truly,

LAWSON TAIT.

Birmingham, December, 1882.

To the Editor of THE LANCET.

SIR,—Mr. Lawson Tait's note on this subject in THE LANCET of November 25th, calls attention to a subject of special importance to the surgeon. It is one to which my attention has been painfully attracted for several years, as Mr. Tait's has been now, ever since Mr. Doran demonstrated by a series of post-mortem examinations at the Samaritan Hospital that disease of the kidneys, unrecognised during life, had been at least a predisposing cause of death, in some cases the only cause. Two years ago, at one of the meetings of the Royal Medical and Chirurgical Society, I adverted to obscure disease of the kidney in these words:—"Now the importance of the matter consists in this—viz., that a patient with disease of the kidneys—say cirrhosis, as my patients had—is in a very unfavourable condition for any surgical procedure, and especially for such an operation as ovariotomy, and for the reason that she possesses very little power of elimination, so that the presence of effete matter in the blood in greater or less quantity is sure to provoke, sooner or later, serious symptoms, under which the patient too surely succumbs. And the worst part of the matter is this, that this condition is not indicated by sufficiently positive signs . . . . I should be glad if any one would furnish us with an unfailing sign of the existence of this condition. For my part I should hesitate, if I did not actually refuse, to operate in such a case." Mr. Tait's

words are a singularly close, though unconscious, repetition of these views, in which further experience has tended to confirm me.

A few months ago I removed a large fibroid (56 lb.) by abdominal section, and the patient died in forty-eight hours, with rapid rise of pulse and temperature (this was as quickly reduced by the ice-cap), gradual suppression of urine, and progressive coma. The kidneys were in exactly the condition described by Mr. Tait. As in his case also, "the details of the operation were quite satisfactory." Yet the examination of the urine, both before and after the operation, failed to apprise me of this condition. A few weeks ago I performed another hysterectomy, and the patient died in twenty-five hours with the most complete suppression of urine. Within six hours the temperature had risen to 104°, and the pulse to 144 (closely resembling my case of hyperpyrexia from carbolic poisoning with suppression of urine). In this case the kidneys were large, pale, and fatty. Before operation the urine measured two pints and a half in twenty-four hours; there was no albumen; specific gravity 1032, and no sugar. Though not satisfied with the state of the urine, yet I did not suspect the kidney disease.

I could mention other cases, chiefly cirrhosis, in which the examination of the urine failed; but these will suffice as examples of two different forms of disease.

On the other hand, I have operated successfully where the urine has contained an abundance of albumen. The last case is the most striking. A single woman, aged thirty, was the subject of a large fibroid, which produced severe menorrhagia and profound anæmia, and exerted such pressure that the lower extremities were very œdematous; the urine contained as much as one-third of albumen, but was otherwise healthy. Within twelve hours after hysterectomy there was a mere trace of albumen, and in three days the œdema had disappeared. A similar series of events occurred in two cases of ovariotomy.

When Mr. Tait tells us that he has operated successfully in cases of Bright's disease, I feel inclined to look upon the statement as not sufficiently precise and to believe that there is an error somewhere, for my experience is so positively opposed to it. It is a remarkable fact that all my cases of true Bright's disease have occurred between the ages of forty and fifty-five, a period of life marked by singular fatality—so often attributed to "change of life"—in the female subject. If a woman lives to the age of sixty and presents a healthy appearance, her kidneys may be assumed to be healthy, unless there be direct evidence to the contrary; and I always give a favourable prognosis. With one exception all my cases of this age—nine in number—have done well.

It has been long known that "Bright's disease" and "albuminuria" are no longer necessarily synonymous, and the above-mentioned cases demonstrate this view. In the cases of albuminuria there was no Bright's disease, and in those of Bright's disease there was no albuminuria. It appears to me that Mr. Tait has laid too much stress on the existence of heart-clot and too little on the kidney disease, which is the true *fons et origo mali*.

I am, Sir, yours obediently,

GEO. GRANVILLE BANTOCK.

Granville-place, Dec. 1st, 1882.

"A PAINFUL CASE AT MELBOURNE."

To the Editor of THE LANCET.

SIR,—As a Melbourne practitioner I read with pain your article with the above heading, and I think, with the aid of information received by the last mail, I can put a very different complexion on the affair. I am writing, however, without any authority, and trusting simply to the sworn depositions and the statement of the Chief Secretary in the Victorian Parliament.

The implication that the woman Stentt died under an operation for criminal abortion rests entirely on three facts:—1. That before leaving home she told a female friend that she was going to Dr. Barker's to get him to do it,—and she also told her to put her dinner into the oven to keep it hot, as she would quickly return. 2. That she died in the consulting-room. 3. That Dr. Barker rendered himself responsible for the funeral expenses.

1. In regard to the first point it is sufficient to say, as to her mental condition, that she drank freely; her friend and intimate, Mrs. Moore, swearing that she would often take a bottle of brandy a day.

2. It is true that she died in the consulting-room, but how long was she there? When she entered the waiting-room Dr. Barker was absent, and a Miss Gatenby was there before her. At 12.30 P.M. Dr. Barker returned and saw Miss Gatenby first, and she left (fortunately there was a clock in the room) at seventeen minutes to one. Between fifteen and ten minutes to one a Mr. Cherry came in, and saw, as he swears, the door open between the two rooms. He had not been there more than two minutes before Dr. Barker, jun., came in the waiting-room for the ammonia-bottle, and remarked to Mr. Cherry that a lady had fainted. So that seven minutes had sufficed for all arrangements, and for carrying them on so far as to cause death, and this, with the door wide open into the waiting-room for any impatient or stupid patient to walk in and see the whole affair! Dr. Barker's account is that on her entry she began to hint at what she wanted, that he put the proposal aside rather sharply, and she then complained of sensations in her abdomen, and slid off the chair on to the floor, fainting, as he thought, but dead as it proved. He then called his son, who was by chance in the house, to aid him, and it was at this period that Dr. Barker, jun., was seen by Mr. Cherry.

But as to the real cause of death. Of this absolute proof is wanting, but her friend, Mrs. Moore, who lived with her in the early part of the year, swears that she used to "go off into fits," and this condition was not likely to be improved by heavy drinking and adultery, with an additional strain from her husband's being constantly expected home from his work up the country. In the post-mortem mention is made of a rupture of the vaginal mucous membrane, up which a probe could pass "for an eighth of an inch." It seems to me very probable that the rupture was post mortem, especially as the examination was made six or seven weeks after death.

It would seem strange that so much could have been made of so little; but certainly Dr. Barker acted rather imprudently. If the body had been simply handed over to the police all this trouble would have been avoided; but he was too sensitive, and suffered for it. In fact, as the Premier said, if the facts now known had appeared at the inquest, public opinion on this subject would have been very different. The Chief Secretary has withdrawn his letter calling on Dr. Barker to resign, and he holds still his high professional offices.—I am, Sir, your obedient servant,

London, Nov. 27th, 1882. AN AUSTRALIAN F.R.C.S.

*** We gladly insert the above letter. Our correspondent does not materially differ from us, except in thinking that Dr. Barker acted "rather" imprudently. We still think that he acted very imprudently, and that the coroner was equally at fault in the matter of prudence. We congratulate Dr. Barker on the fact that his character and the additional facts brought to light by the Government, and mentioned by the Premier, and alluded to in the above letter, have induced the Government to withdraw their request for Dr. Barker's resignation—action on the part of the Government of which we entirely approve.—ED. L.

THE VACCINATION PROSECUTIONS AT BRIGHTON.

To the Editor of THE LANCET.

SIR,—In your journal of last week there is an annotation on vaccination prosecutions at Brighton, in which reference is made to an article in an evening paper, charging one of the public vaccinators of Brighton with having made the extraordinary statement "that he had no pure vaccine lymph, and if he had he would not use it," and that in consequence, Henry Holman and others, who had brought their children to the public vaccination station, had taken them away unvaccinated. I am the public vaccinator alluded to, and shall feel much obliged if you will kindly allow me to state, most emphatically, that there is no truth whatever in the accusation. I was asked if the vaccine I was using was direct from the calf or cow, and if I could produce the calf for inspection. I replied in the negative, but promised to obtain lymph direct from the calf in a few days if it were

really preferred. This, however, did not satisfy the objectors.

I believe most people would consider that the charge against me refutes itself; it is most certainly of the same reckless character as others which have been from time to time made by the anti-vaccinationists of Brighton, and which hitherto I have thought it quite unnecessary to notice.

I am, Sir, yours faithfully,

LEWIS C. BADCOCK,
Public Vaccinator of the Western District of Brighton.

Brighton, Dec. 5th, 1882.

*** We think it ought to be clearly understood that public vaccinators will be acting wisely in declining to use stored calf lymph if frequent demand is made for it. If animal lymph is to be used for any other purpose than the renewal of stock, it is absolutely necessary that the vaccination should be done directly from the calf.—ED. L.

NOTE ON THE DURABILITY OF KOCH'S BACILLI OF TUBERCULOSIS.

To the Editor of THE LANCET.

SIR,—In October last a specimen of phthisical sputum, containing swarms of Koch's bacilli, was kept for thirty-six hours at a temperature above 100° F. At the end of that time it had the characteristic odour of decomposing albuminous substances, and showed under the microscope great numbers of putrefactive organisms; the bacilli of tuberculosis, recognised by their staining reaction, were found quite unchanged. The same specimen was then spread out in a watch-glass, covered to exclude dust, and left to dry partially at the ordinary temperature of the room, usually between 50° and 60° F. This was on October 18th. On December 2nd, a portion was moistened with distilled water, and stained by Gibbes' method; the bacilli were readily found, and showed no appreciable alteration. Desiccation is known to be an excellent method for the preservation of different bacteria, but in this experiment there was no desiccation; the sputum was still moist at the end of the five weeks. The result shows that these organisms are capable of resisting putrefactive changes for a very long time, so far, at least, as their form and staining reaction are concerned; whether under these circumstances they retain the power of growth and reproduction is a different question. I made an attempt to cultivate bacilli from this specimen by Koch's method, but failed; the apparatus used was, however, imperfect.

I am, Sir, yours obediently,

H. S. GABBETT, M.D.,
Assistant Physician and Pathologist to the Royal Chest Hospital.

December, 1882.

"UNQUALIFIED ASSISTANTS."

To the Editor of THE LANCET.

SIR,—As the above-mentioned subject has been under notice in your columns frequently of late, I am anxious through your valuable journal to gather some information on the subject. First, is it right that an unqualified assistant should perform the duties connected with parochial work or other Government appointments? Second, is a medical man justified in leaving such appointments and his practice generally, each probably for a few days, in the hands of such a substitute? Third, as far as I know, it is against certain laws affecting the medical profession that an unqualified man (one who does not even possess an apothecary's certificate) should compound and dispense drugs in an open surgery; is not this the case? Fourth, and lastly, ought medical men to sign death certificates of patients attended by their unqualified assistants, but who during their illness they have not seen personally? If the condition of matters specified by these questions exists, is it not high time attention was directed to this subject?

In these days of "medical reform," when the present system of examinations and qualifications for practice is under review, is it not essential to such a reformation that all "unqualified practice" should henceforth cease, even in the case of "assistants"? It is neither just to the public nor to the younger members of the profession that such men should be permitted to practise medicine, some of whom are dubbed "doctor," and assume the position of legally qualified practitioners. The fact that a man is not duly qualified should be enough to exclude him from practice. Non-qualification is generally the result of repeated and fruitless efforts to qualify. A man, therefore, who cannot come up to the minimum standard of knowledge necessary to obtain a diploma to practise his art is surely a person who ought not to be trusted with the responsibilities and dangers of actual practice.

I am, Sir, yours faithfully,

December, 1882. M.B., C.M., &c.

THE RECENT EPIDEMIC AT BANGOR.

AT a meeting of the medical practitioners of Bangor, held on Tuesday, November 28th, it was resolved that the following letter be forwarded to the press for publication.

Bangor, North Wales, Nov. 28th, 1882.

Sir,—We, the undersigned medical practitioners of Bangor, have much pleasure in stating that the epidemic of typhoid, which has prevailed in this city for some time past, has now subsided, and that the town and neighbourhood are in a remarkably healthy state.

As reports relating to this epidemic have from time to time appeared in your columns, we trust that you will kindly insert this letter.

HUGH B. HUGHES, Surg. C. & A. Infirmary.
H. R GREIG HUGHES, Surg. C. & A. Infirmary.
R. ROWLAND JONES.
R. LANGFORD JONES, M.R.C.S.
E. OWEN PRICE, Dep. Med. Officer of Health.
J. RICHARDS, Phys. C. & A. Infirmary.
W. WILLIAMS.
RICHARD JONES.
EDWARD J. LLOYD, M.D.
H. GREY EDWARDS, M.B., B.Ch.

EDINBURGH.

(From our own Correspondent.)

THE weather here for some time past has been extremely inclement, and several of the University professors have been unable to meet their classes. Professor Grainger Stewart, who has been confined to his room for the past fortnight, is, we are glad to hear, now convalescent; Professor Simpson, who was also confined to the house for some days, is also better; and it is hoped that Professor Greenfield, who has also been unwell, will soon be able to resume his duties.

The total number of students who have matriculated at the University this session is, I understand, 2909, being an increase of 94 on the winter session of 1881–82. The increase is mainly due to the medical faculty, in which there is an increase of 76. The increase in first year's medical students is 59; and the total number of medical students attending the University classes is 1388.

Since I last wrote there has also been a considerable improvement in many of the extra-academical classes. The dissecting-rooms at Minto House are quite full. Dr. John Duncan and Dr. Affleck have large classes, while the numbers attending those of the extra-academical lecturers have also increased.

The Health Committee of the Town Council have decided, after mature consideration, to retain the whole of the old surgical hospital as an infectious hospital. It is intended to admit those classes of cases which are not received into the fever hospital belonging to the Royal Infirmary. In the plans provision is made for securing entire isolation of small-pox patients, for affording accommodation for the better class of citizens who may desire, for payment, isolation and treatment in a well-conducted hospital; for observation wards, in which patients, the exact nature of whose cases has not been determined, will be placed; and, lastly, for quarantine or reception wards, which will be used for families of infected houses until the houses in which they reside are properly disinfected. The latter wards are intended to be used in such a case as an epidemic breaking out in a tenement, when, if necessary, the whole of the inhabitants might be removed to the quarantine wards and

kept there, if thought desirable, for several days, till the houses are thoroughly disinfected.

Edinburgh, Dec. 6th, 1882.

GLASGOW.

(From our own Correspondent.)

THE Glasgow Police Bill, of the sanitary clauses of which THE LANCET published a summary a few weeks ago, has now been withdrawn. It will not be presented to Parliament during this session at least, on account of the intention announced by the Lord Advocate to prepare a Police Bill applicable to all the large Scotch towns generally. We are in the meantime, therefore, saved from the infliction of what nearly all the medical men of this city felt to be an injustice—namely, the enforcement of the notification of infectious diseases by the medical attendant, as well as by the householder. This principle of "dual responsibility" was specially objected to, and strongly opposed here. The deputations which waited on the Town Council, however, found that body quite enamoured of the powers these compulsory notification clauses conferred on their officers; and it is not at all improbable that had the Lord Advocate not upset the Council's calculation we should ere long have been saddled with dual responsibility, under penalties both severe and cumulative. Not only the profession, but the public at large, are pleased that this attempt at what has been frequently and well described as "grandmotherly legislation" has fallen through.

The committee in charge of the Southern Hospital scheme will soon be able to appeal to the public for funds, with definite proposals as to size and style of buildings, &c., on which to base their appeal. No fewer than forty-five sets of architects' plans have been lodged with the secretary, and as these are very varied, some time must elapse before a final decision is come to regarding them.

Dr. Francis Henderson, whose health compels him to remove from Helensburgh, and who has for eighteen years practised in Helensburgh and the Gareloch district, was, on last Saturday afternoon, presented with a drawing-room timepiece and ornaments, £500, and a diamond ring for Mrs. Henderson, on the occasion of his removal to Glasgow. These gifts were subscribed by 102 patients and friends, in grateful acknowledgment of professional skill and in token of esteem and affection on the part of the community.

The "annual meeting" season is once more upon us. Apparently the influence of Christmas is supposed to have a stimulating effect in the liberality of subscribers. That most deserving institution the Glasgow Maternity Hospital held its annual meeting a few days ago. The report showed that 256 cases had been treated in hospital, and 1254 at home; total 1510, or an increase of 200 over last year. No fewer than 154 students attended at the hospital and benefited by its practice last year.

SCOTTISH NOTES.

(From our own Correspondent.)

THE sanitary condition of the Aberdeen Royal Infirmary has frequently been the subject of adverse criticism by members of the directorate and others, while the remedies to be applied were not so obvious. It has been recognised by well-wishers of the institution that when drainage and closet arrangements came to be overhauled changes of a more considerable kind would also be necessary; and the recent discussions as to a proposed new wing, &c., make the present a suitable opportunity for giving anxious thought to the very complete scheme now propounded by Dr. Angus Fraser. Should this or any similar plan be followed, the extensions and improvements will be alike great. At present there is deficient accommodation for patients, a want of special wards, insufficient provision for the resident staff, nurses, and servants, and defective watercloset and bath accommodation. Dr. Fraser proposes that four pavilions of three floors each, wholly devoted to the reception of patients, should be formed by extending the present wings; that each of these twelve wards should measure sixty feet by twenty-three feet; that the central part of the present building should be reserved as the administrative part of the institution, and provision made, on a line with the central block, for the various special wards. By these means the number of beds available would be largely increased, and clinical teaching much facilitated. Now that the matter is ripe for discussion and action, it is to be hoped that the directors will institute structural changes on a sufficient scale; and the profession will be further interested in knowing how the proposals for the increase of the staff, as well as that most needful of reforms, the provision of better means for gynæcological teaching, shall be met.

Typhus fever has again made its appearance in Aberdeen, and apparently in a virulent form. The medical officer of health has taken vigorous action, which it is hoped may be successful; but, looking to the less immediate future, there is, perhaps, more hope in the proposed inquiry as to the desirability of dealing with certain parts of the city under the Artisans' Dwellings Improvement Act. Dr. Beveridge may be trusted for energetic action as chairman of the Health Committee, and if he determine that the Act should be put in force, it is just possible that the hard-headed citizens may agree with him that it is better to begin the improvement of the town by efforts at eradicating such preventable diseases as now so frequently make their appearance. In the meantime the Council has determined to proceed with the City Improvements Bill. It would seem that the Board of Supervision can occasionally be peremptory enough in their demands upon local authorities, and the Inverkeithing Town Council has this week come under the lash. The inspecting officer of the Board has had grave reason to complain of the neglect of drainage in their small town, and a demand is now made that within fourteen days a report on its sanitary condition be transmitted. The Council, at their meeting a few days ago, determined to place the matter in the hands of an engineer, with a view to the immediate carrying out of a proper drainage system.

The Dundee authorities have now received Dr. Stevenson Macadam's analysis and report upon the Monikie water, the admission of which to the town is causing some interest. The question in dispute is whether the water should be filtered or unfiltered, as preparation for this process will cost £15,000; and samples of both qualities were sent for analysis. Dr. Macadam shows that the amount of organic and volatile matter is less in the filtered water, but that such matter in either or both waters is of a harmless and innocuous character. Some of the Commissioners, in view of the latter statement, object to the proposed outlay, and further discussion of the subject has been delayed.

Previous to last session, graduates of Scotch universities had it in their option whether to become members of the general council; but an Act was then passed which made this one of the conditions of graduation. Formerly either political party was willing to pay the necessary fee and so to secure the future vote; but it appears that there were many men who refused even this easy method and declined to register. This is brought out by the now published returns referring to Edinburgh and St. Andrews, as more than double the usual number is this year added to the parliamentary roll. Of the 353 members, Edinburgh claims 318, and St. Andrews 35.

An epidemic of typhoid fever, causing the local authorities much anxiety, has occurred in the neighbouring towns of Dumfries and Maxwelltown. It appears that cases were, so far as space allowed, admitted to the Dumfries Infirmary, but that the accommodation there was of the most meagre kind. There is no special hospital for infectious diseases in the place; and Professor Maclagan, of Edinburgh, has been invited to advise the authorities in the circumstances. Though a good deal has been done in Scotland since the passing of the Public Health Act towards providing adequate hospital accommodation, much remains to be effected; and it seems only in response to local scares, such as is now affecting Dumfries, that any advance is made.

IRELAND.

(From our own Correspondent.)

THE first meeting of the Academy of Medicine took place last week, when the Pathological Section was inaugurated by an address from Dr. J. M'Purser. There was a large attendance of members present.

Complaints have recently been made by the guardians of

the South Dublin Union, to the effect that the medical staff belonging to the workhouse do not attend as regularly as they should; and that upon numerous occasions lately, when their services were required for urgent cases arising at night, they were not available when sent for. It was also suggested that resident medical officers should be appointed in place of the visiting staff. Drs. Jennings, Burne, and Owens, in addressing the Board on this subject, stated that it would inevitably tend to the disadvantage of the sick poor if the staff were now to be reduced, when the number of sick and infirm have so largely increased. The staff have the advantage of immediate consultation with each other in complicated or difficult cases, so that the inmates of the workhouse are, as regards skill and attention, placed on a level with the wealthy classes of society. As regards the charge of inattention, they remarked that the statement is as unworthy of notice as incapable of proof. The consideration of the matter has been deferred for a few days.

The new scheme which has been adopted for providing special departments in the Belfast Royal Hospital has not met with general satisfaction, and it is thought by a good number that the hospital does not possess the requisite space nor the necessary funds for carrying out these additions to the institution. It has been stated that the greatest difficulty has been experienced in finding room for the majority of patients seeking admission, and that recently when application was made by one of the staff for a ward to isolate certain cases it could not be obtained from want of room. It has been estimated that the twelve beds for diseases of the eye and ear, and diseases of women, will not cost more than £40 a year; but a more probable estimate may be fixed at fully ten times that amount, more especially if the cost of the extern departments is included in this sum. For a populous town like Belfast, rapidly increasing in wealth and the number of its inhabitants, it appears strange that but one general hospital should be considered sufficient, and it seems desirable that another institution similar to the Belfast Royal Hospital should be established, which would permit additional space in both hospitals for special departments.

Mr. Rawdon Macnamara, of the Meath Hospital, has had a very serious attack of erysipelas, but I am happy to state that he is now progressing favourably.

Dr. A. Spencer, whose death from typhus fever took place some time ago, has left his widow in bad circumstances, and a subscription has been started on her behalf.

A well-trained nurse, to carry out efficiently the orders of the medical attendant, occupies a very important position in the treatment of the sick. Consequently the Belfast Nurses' Home and Training School may be regarded as a valuable institution, for during the past ten years it has sent out eighty-six nurses, trained in the Home, for hospital and private nursing; it has also supplied matrons to several infirmaries in Ireland, and nurses to various parts of the colonies. It is satisfactory to learn that the institution is prospering, and that it is now entirely free from debt.

Mr. J. G. Chidley, A.B., late resident pupil of the Hardwicke Fever Hospital, recently died from an attack of typhus fever, which he contracted in the discharge of his duty. The esteem in which the deceased young gentleman was held was shown at his funeral, when a large number of his friends and comrades assembled to pay the last tribute of respect to his memory. The remains, on reaching the churchyard, were borne by the students to the grave, and on the coffin were placed some handsome wreaths presented by those present.

In an annotation at p. 956 of last week's LANCET, on the recent outrages in Dublin, by a printer's error it was made to appear that the gentleman who had been stabbed by assassins near his residence had died. This was not the case; but his condition at the time was critical. It is satisfactory to state that he is now progressing fairly towards recovery. Dooley, or Dowling, the man who shot Cox, has improved so much since his admission into the hospital, that it is expected he will be able this week to be transferred to Kilmainham prison.

During the past month nearly 200 deaths from diseases of the lungs took place in Belfast, principally owing to variations of temperature and the excessive amount of moisture present in the atmosphere. Scarlatina prevailed to a considerable extent, some of the cases being of a very malignant character.

PARIS.

(From our Paris Correspondent.)

THE horrible event which took place in Paris about the middle of October, when, as will be recollected, a young lady, aged about twenty, committed suicide by throwing herself off one of the towers of Notre Dame, her body being found on the railings of the cathedral literally severed in two across the lower part of the trunk, has led to a very interesting discussion from a scientific point of view. The question was raised as to the manner in which death took place in this case. Professor Brouardel, the medical jurist of Paris, stated in his report, that owing to the rapidity of the fall, death was caused by asphyxia, and not by the section of the body. He founded his argument on the fact that the velocity of a body falling from a height passes through five metres of space in the first second, fifteen metres in the second, twenty-five metres in the third, and thirty-five in the fourth second; consequently, the fall of the body in this case would occupy four seconds, the distance traversed being eighty metres, which is the height of the tower; but as the unfortunate victim fell on the balustrade, which is ten metres above the ground, this would make the duration of the fall rather less than four seconds. M. G. Bontemps, of Amboise, writing in *Nature*, the homonym of the English publication, endeavours to refute M. Brouardel's conclusions by observing that the velocity above mentioned is less than that of the rapidity of the mail train to India, which he considers to be even less than the physiological limit of speed a man could go through with impunity, as is verified every day by the engine-drivers and stokers of these trains. In response to this, another writer remarks that the argument of the correspondent in *Nature* is equally erroneous, as the engines of all rapid trains are in all seasons, and some of the other trains in winter, provided with a screen, in which are fitted with two discs of glass, which shelters the engine-driver against the enormous pressure of the air, without which arrangement the driver would not be able to support it for two minutes, particularly when to the rapidity of the course is added a cold wind blowing towards the train at the rate of ten metres per second. The latter author concludes that the young lady in question could not have been completely asphyxiated when her body reached the balustrade, but she must have been insensible, and thus relieved of the consciousness of the horrible mutilation her body was subjected to.

The application of the actual cautery to the neck of the womb in certain affections of that organ may be a useful means of treatment in able hands, but when employed indiscriminately the temporary benefit which a few patients may derive from it will not counterbalance the dangers attending it; for in many cases the mischief inflicted by the use of the red-hot iron has been so great, almost irreparable, that many gynæcologists have rejected it altogether in their practice. Certain practitioners employ the actual cautery in uterine affections under the conviction that it is perfectly harmless, and that nothing but advantage could be derived from it. To these may be applied the well-known adage of Morgagni: "Sunt plures medici qui ægros ob id interimunt quia nesciunt ipsi quiescere." Dr. Sireday, Physician to the Lariboisière Hospital, has given the following illustration, to show that such a practice is not devoid of danger. A patient who had been treated at her home for metritis, and to whom the actual cautery had been applied for some months, entered M. Sireday's ward for severe dysmenorrhœa with almost complete retention of the menses. On examination Dr. Sireday discovered that owing to the influence of the repeated application of the red-hot iron the neck of the womb was all but completely destroyed; its orifice was so narrow that it was impossible to introduce into it an ordinary pocket-case probe. After prolonged treatment by gradual dilatation of the canal, the latter was rendered permeable, but the cure was not complete; the patient was obliged to return to the hospital as all her sufferings recurred, and she went through the same treatment for some time. Dr. Sireday remarks that this is only one among many such cases that have come under his observation, and he could cite others where the application of the actual cautery to the neck of the womb was attended with fatal results owing to consecutive metro-peritonitis.

An unsuspected source of public poisoning has been brought

to the notice of the police authorities, arising from the use by bakers and confectioners, for the purpose of heating their ovens, of old beams, &c., procured from the demolition of houses. This timber is generally painted over with preparations of lead, copper, and arsenic, and it has been found that the ashes left after combustion contain more or less of these poisonous substances, which adhere to the sides of the ovens and to the bread and confectionery during and after baking. The timber employed for telegraph posts, railway sleepers, &c., present the same dangers, as it is generally painted over, or impregnated, with different sorts of mineral solutions, such as the sulphate of copper, corrosive sublimate, &c., for the purpose of preserving the wood. The Prefect of Police has, therefore, forbidden the use of the timber obtained from the above sources by bakers and confectioners.

Those coming over to the continent will be repaid by a visit to the aquarium at Havre, which has just been enriched by an interesting fish rarely met with in these latitudes. This fish, which was caught by the crew of a pilot boat, is known under the name of moon-fish, from its resemblance to the earth's satellite, and belongs to the family of the "gymnodontes." The body of the fish is raised and rounded, the skin shines like highly-polished silver, and it is said that when the fish floats on the surface of the water its body is quite phosphorescent. It measures one metre in length by one metre forty centimetres from the superior extremity of the dorsal fins to those of the anal extremity.

[In my last communication, on M. Gambetta's wound, page 954, for "Ville d'Arzay," read *Ville d'Avray.*]

Paris, December 5th, 1882.

THE UNITED STATES NATIONAL BOARD OF HEALTH AND VACCINATION OF IMMIGRANTS.

(*From a Correspondent.*)

ONE of the most useful branches of service of the National Board of Health (United States) is a system of inspection and vaccination of immigrants. Four years ago there was not a death by small-pox reported in the United States. Then began a remarkable increase of immigration from the continent of Europe, and especially of Polish and Russian Jews, who are generally unvaccinated. As they generally remained in the foreign seaport towns several days before embarking, and usually occupied low lodging-houses where contagious diseases were prevalent, small-pox began to appear among them. As ocean transit now occupies but ten days, the infected emigrant could reach our ports in apparent health, and pass quarantine unsuspected. More than that, he can take cars on arrival, and reach a distant western settlement within the period of incubation. It very naturally happened that with this rising tide of immigration small-pox outbreaks began to be more and more frequent in the Western States, until at length the pestilence was regarded as epidemic. To meet the emergency the National Board of Health organised a system of inspection and vaccination of immigrants, which has now been in operation about five months, and has given the most satisfactory results. The work begins with the embarkation of the emigrant in the foreign port, and he is followed to his destination in his western home. The ship surgeon is required to examine every emigrant with reference to the evidences of protection by vaccination. If they are not present, or are unsatisfactory, the surgeon proceeds to vaccinate. To all protected persons he issues a card bearing the following information, as an example, printed upon it:—

CUNARD LINE.

VACCINATED.

S.S. SCYTHIA.

(Signed)
W. J. KING, *Surgeon.*

On the obverse is the following, printed in English and four other languages:—"*Keep this card to avoid detention, at quarantine and on railroads in the United States.*" The immigrant is required to keep this card, and show it when required. It is first presented to the port physician, and then to the sanitary inspectors on the railroads, at the various inspection stations. The railroad inspections are comparatively easy, for the immigrant trains are made up like freight trains, and run at regular intervals, conveying only immigrants. Usually the inspectors board the train at some convenient station, and carry on the inspection and vaccination while the trains are moving, thus causing no delay. I have before me the monthly statement of the Supervising Inspector of one district—viz., the Western district. It shows a total of 14,924 inspections, and 2918 vaccinations; 234 had never been vaccinated. During the four months ending September 30th the total number of inspections in that district was 78,366, and of vaccinations 13,842. The result of this service, the first of the kind ever established, I believe, has been most useful. Not only have small-pox outbreaks ceased, but the inspectors have intercepted other contagious diseases, as scarlet fever, measles, and diphtheria. They have also greatly improved the sanitary condition of the immigrant trains. Inspector Ranch remarks:—"Evidence of the growing interest in this protective measure is found in the increasing numbers of immigrants vaccinated or revaccinated just before sailing. This is especially true of the English and Scotch, and in a great measure offsets the occasional opposition to the inspection met with from individuals of the same nationalities, and which seems to be due to the anti-vaccinationists of Great Britain."

New York, October 15th, 1882.

TENEMENT HOUSES IN AMERICA.

(*From a Roving Correspondent.*)

IT is popularly supposed that in the large towns of America there are no poor, in the English meaning of that term. This is, however, a great mistake, and as a matter of fact some American cities contain as degraded specimens of the class of people to be found in tenement houses in Great Britain as will be met with anywhere in the world. It may be interesting to inquire how it is that in the New World, where labour is at a premium, and where there is more work to be done than hands to do it, no improvement has taken place in that class of persons who inhabit tenement houses. In a town like Chicago, which has been nearly rebuilt during the last ten years, the cause of the existence of the worst class of tenement house is due to the fact that the enormous number of emigrants who annually enter the capital of the West far exceeds the capacity of builders and capitalists. Hundreds of new houses are erected annually, but an influx of 60,000 or 80,000 emigrants renders it impossible to provide suitable house-room for all. In spite of many difficulties, however, it must be confessed that the health authorities, under the energetic superintendence of Dr. De Woolf, the able Commissioner of Health, have done great public service. Mainly at their instigation, and in spite of considerable opposition from various quarters, powers have been conferred upon the health authorities which, as they are vigorously exercised, have proved the greatest boon to the inhabitants of Chicago. The following are the chief sections of an Act for the regulation and inspection of tenements and lodging-houses and other places of habitation, which was approved and put in force on and from May 30th, 1881. The Act applies to all incorporated cities of 50,000 inhabitants within the State of Illinois.

1. Architects, builders, or other persons interested in any projected tenement, lodging-house, or other place of habitation, must submit plans and specifications of any such building to the Health Commissioners, to enable them to examine, approve, or reject the same unless or until adequate provision is made for the ventilation of rooms, light, and air-shafts, windows, ventilation of waterclosets, drainage, and plumbing.

2. Every plumber interested in the plumbing work of such buildings must receive from, and proceed according to the specifications and written instructions of, the Health Commissioners before commencing work.

3. The plumber is compelled, after the completion of his work, and before any portion of it is covered up, to notify the Commissioners in writing that the buildings are ready for inspection, and it is unlawful for any person interested to cover up or in any way conceal such plumbing work in or

about any such buildings until the Health Commissioners have approved it.

4. Provision is made to impose a penalty for every such offence of from £20 to £40 upon any architect or builder who fails to comply with the foregoing regulations.

5. A similar penalty is imposed upon plumbers in case they fail to comply with the law, together with a further penalty of "£2 for each and every day such plumbers shall after first conviction neglect or refuse to obey the Act or the written instructions of the Health Commissioners," with a forfeiture of his licence to do business in the said city for one year after conviction for a second offence.

With the view of facilitating the application of the above Act various printed forms have been prepared by the Health Department, which provide (*a*) plans for ventilation, light, plumbing, and drainage; (*b*) permit signed by Health Commissioner sanctioning the erection of buildings on the following or some special conditions in certain cases. (1) Every habitable room must have at least one window opening directly upon the street or yard, or upon a court or light shaft. (2) Every light and air shaft for habitable rooms must be at least twelve square feet in area for a three storey house, sixteen square feet for a four storey house, and twenty square feet in area for a five storey house; and in every case not less than two feet wide in the clear. Shafts between two houses and common to both must be double this area. (3) All windows which open on shafts shall be hung with weights so as to slide vertically, each window being not less than twelve square feet in area. (4) Water-closets shall not be ventilated by a shaft which ventilates habitable rooms where they do not open otherwise to the external air. Watercloseets must be ventilated by means of a separate shaft, not less than three square feet in area, to extend above the roof, and to be arranged for the admission of light and air at the top. (5) No alteration in the light and ventilation of the premises (for which a permit is granted) shall be made except upon the express written approval of the Commissioner of Health; nor shall any additional structure be erected upon the lot without such approval, and a special permit. Printed upon the face of the permit are details of the plan of plumbing, which will be insisted upon by the Commissioner of Health. This plan provides that all materials used must be of good quality and free from defects, and all work must be executed in a thorough and proper manner. All plumbing must be so placed as to be readily inspected. Every soil- and waste-pipe, iron or lead, must extend through and at least four feet above the roof, be of undiminished size, and provided with suitable top or cap. The house-drain, if of iron—a material much used for these pipes in America—shall have a fall of at least half an inch to the foot, and be provided with a proper trap near the street, and with an inlet for fresh air inside the trap. It should run along the cellar walls—a favourite plan in America—and never be hidden underground. All iron soil-pipes must be sound, free from holes, of a uniform thickness, of not less than ⅜ in. for a diameter of two, three, or four inches, or ⅜ in. for a diameter of five or six inches. Before connexion they must be thoroughly coated with coal tar pitch, inside and outside, which must be applied hot. All joints in the soil- and waste-pipes must be so caulked with lead, or cement made of iron filings and sal ammoniac, as to make them impermeable to gases. When the house-drains are not of iron they must have twice the above given internal diameter and half the grade, unless in special cases specially sanctioned. Every sink, drain, watercloset, and tub, or set of tubs, must be separately and properly trapped. When a lead pipe or trap is connected with an iron pipe the joint must be made through a metallic sleeve or ferrule, and be caulked with lead. All traps must be ventilated by a special pipe entering above the roof. Every "safe" under a basin, bath, or other fixture, must be drained by a special pipe, not directly connected with any waste-pipe, drain, or sewer. Every watercloset must be supplied with water from a special cistern, and not direct from the main. No overflow-pipe from the cistern to be directly communicated with any soil- or waste-pipe or drain. No cistern for drinking water to be lined with lead. It is stated that wrought iron, steam-fitted, glazed pipes are the best for house drains, and their use is recommended. When the work is completed, and before it is covered up and the house occupied, the Health Department must be notified, to enable the authorities to send an inspector, upon whose report the Commissioner will act before its final approval. Equally stringent regulations are enforced in respect to the existing or old tenement houses, which are regularly inspected by a staff of trained officials, and it may be said with truth of Chicago that there, if anywhere in the world, the life of a jerry builder, or plumber, or owner is not a happy one. For this reason, and as a guide to those who are striving for improvement in these matters in England, the above regulations and information cannot fail to be of interest. The whole plan of administering the Health Department of Chicago has been admirably conceived, and is being ably administered by Dr. De Woolf, the present Commissioner of Health. I would advise anyone who desires to have a model set of forms and regulations for controlling the health arrangements of a large town, to write to Dr. De Woolf for those in use at Chicago. It is not a little surprising to find that whereas wages are exceedingly high throughout America, salaries, and especially the remuneration of the health officers, are unusually small and inadequate.

(To be concluded.)

Obituary.

EDWARDS CRISP, M.D.

WITH the death of the subject of this memoir a striking if not an imposing figure disappears from the stage of medicine. A man of indomitable courage, self-reliance, and energy, of unimpeachable integrity and utter unselfishness, of unwearied industry, of high attainments, and (at any rate as far as his profession was concerned) of much practical sagacity, Dr. Crisp ought to have attained a much higher eminence among the medical men of his time than he actually did attain, or than an impartial posterity will accord him. He commenced his professional career as a general practitioner, and rapidly rose into large and lucrative practice; and there is no doubt that, had he remained in general practice, he would have been one of the foremost general practitioners of his time. Had he been fortunate enough in early life to have been appointed physician or surgeon to a London hospital we have every reason to believe that he would have achieved high eminence as a consulting practitioner and teacher. Or had his early scientific training been more exact and more complete than it was, and had he consecrated his life from the first to scientific pursuits, he would probably have made a distinguished name for himself as an anatomist, a physiologist, or a pathologist. But, unfortunately for him, he seceded from general practice at the time when success in it was assured; and he entered upon consulting practice and the pursuit of scientific medicine under unfavourable conditions, which warped his judgment and led him to waste many of his best years in controversy and warfare. But with all his failings Dr. Crisp was a man who commands our sympathy and respect, and especially was one whom general practitioners may feel proud to regard as one of themselves; for he ended his life as he commenced it—in general practice; and the works by which he will be best remembered are those which he gave to the world while he was a general practitioner. We refer to his important observations on the relation between Chlorosis and Ulcer of the Stomach in young women, and his Jacksonian Prize Essay on the Structure, Diseases, and Injuries of the Bloodvessels.

Dr. Crisp was the son of Mr. Edwards Crisp, a gentleman farmer, and of Mary his wife. He was born at Rendlesham, Suffolk, on Dec. 10th, 1806, and was educated at the Grammar School at Ipswich. In 1823 he was apprenticed to Dr. Cream of Long Melford, and in 1826 entered as a pupil at the combined schools of St. Thomas and Guy's, and pursued his studies there for two years. He became a licentiate of the Apothecaries' Hall in 1828, and a member of the College of Surgeons in 1829. During the years 1829 and 1830 he studied in Paris, mainly at the Hôtel Dieu and La Pitié, and thus not only acquired a good knowledge of French medicine and surgery, but became an accomplished French scholar.

After the completion of his education he resided for a short time with the late Mr. Bristowe of Camberwell, and in 1830 commenced practice in Brixton. The following year he removed to the Walworth-road, where he conducted a large and increasing general practice for the next fifteen or sixteen years.

It was probably the success of his work on the Arteries

(written during this period), and the credit it brought him, that determined him to become a physician. He disposed of his practice in Walworth and went over to Dublin to study there; and to Scotland, where, in 1848, he obtained the M.D. degree of the University of St. Andrews. Then, returning to London, he presented himself before the censors of the Royal College of Physicians as a candidate for the membership. Unfortunately he was rejected; and, still more unfortunately, instead of bearing his disappointment, and offering himself again on a future occasion, he made a violent attack on the examiners and published his own version of the examination he had undergone. His thorough honesty and truthfulness were manifested in this ill-judged production, for no assertions of their own could have justified his examiners in the eyes of the profession so strongly as they were justified by Dr. Crisp's own testimony. We need not pursue this subject further than to say that this incident gave a polemical bias to most of his work and writings during the next few years; and that for some time he conducted, almost unaided, with much vigour and no inconsiderable literary ability, a monthly journal called the *Medical Examiner*, in which he exposed, with some virulence, the shortcomings and errors of the various examining bodies, but in which, also, he strenuously advocated many reforms, of which some have been already carried out, and others will doubtless follow.

It was about this time that he started practice as a physician in Parliament-street, where he resided until the year 1857. He then removed to the King's-parade, Chelsea, where he remained five years. During the whole of this time he was engaged in consulting practice and in scientific pursuits. He had married, however, about the year 1846, and the expenses and responsibilities attendant on an increasing family at length determined him to resume general practice. This he did twenty years ago, and removed to Beaufort-street, Chelsea, where he resided thenceforth.

This was probably the happiest period of his life. He had ceased to be systematically aggressive in medical politics. He conducted a large general practice among patients whom he made his friends. He was a constant attendant at the Pathological and Medical Societies, and took an active share in their proceedings. He spent much of his time in pathological investigations, mainly in reference to the lower animals and to parasites. And he found happiness and peace in the society of his wife and in the education of his children; for he was pre-eminently a domestic man, and a loving and unselfish husband and father.

The amount of work which Dr. Crisp accomplished in his life-time was amazing. He published innumerable papers on Medicine, Surgery, Zoology, Physiology, and Pathology in the medical and zoological journals, and in the Transactions of the Pathological Society. He obtained the Jacksonian Prize for his work on the "Structure and Diseases of the Large Vessels"; the Astley Cooper Prize for the essay "On the Structure and Use of the Thyroid Gland"; the Astley Cooper Prize, again, for his essay "On the Pancreas"; the Jacksonian Prize a second time for his treatise on "Intestinal Obstructions within the Abdomen"; the Fothergillian Prize for an essay on "Croup and Diphtheria"; and a prize from the Bath and West of England Society for a paper on "Lamb Disease." It may be added that he first demonstrated the existence of valves in the splenic vein.

For some years he habitually dissected the animals dying at the Zoological Gardens; he was always a zealous student of comparative anatomy; and he gradually accumulated (besides a very large collection of parasites) a museum of comparative and pathological anatomy, comprising over 5000 specimens.

Amongst the many honours Dr. Crisp obtained were those of a vice-presidency of the Pathological Society and a councillorship of the Pathological Section of the International Medical Congress when it met in London in 1881.

Dr. Crisp was a short, strongly-built, active man, with a massive bald head, a handsome face, a genial smile, and a pleasant musical voice. He was a ready, self-reliant speaker, always prompt to attack, but ever ready to acknowledge his own mistakes. He was a warm friend and (excepting towards the Colleges) a generous enemy. He had much literary and artistic taste.

His health during a long life had been singularly good; and he died without warning, probably of spasm of the heart, on the morning of November 15th.

RICHARD CROSS, M.D., F.R.C.S., J.P.

WE regret to record the death on Nov. 19th of Dr. Cross, who for forty-two years had occupied a prominent position as a medical practitioner in Scarborough. He was at the time of his decease Surgeon-Major on the staff of the North and East Riding Brigade of Artillery Volunteers, a Justice of the Peace for the Borough, Fellow of the Royal College of Surgeons, and of the Royal Medico-Chirurgical and Obstetrical Societies. He was Mayor of Scarborough in 186 and occupied the position of alderman for many years. His qualifications were M.D. (1852), M.R.C.S. (1840), L.S.A. (1839). He was held in high honour and esteem not only for his professional qualities, but also for the courtesy and geniality which he manifested to everyone with whom he came in contact. The mayor and corporation, the magistrates, the artillery, and the rifle volunteers attended his funeral, and the whole route from his house to the cemetery was thronged by thousands of spectators. His son, Mr. T. B. Cross, M.A. of Caius College, Cambridge, succeeds to his practice.

Medical News.

APOTHECARIES' HALL.—The following gentlemen passed the examination in the Science and Practice of Medicine, and received certificates to practise, on Nov. 30th:—

Holton, Richard, Lincoln.
Masters, Alfred Thomas, Westbury-road, Westbourne-square.
Osborn, Frank Charles, Keppel-street.
South, George, Peckham.

The following gentlemen also on the same day passed the Primary Professional Examination:—

Albert Bowhay, Walter Horncastle Burrows, and Charles Langford Josling, Charing-cross Hospital; Walter Wise, Middlesex Hospital.

THE Stoke-upon-Trent Board of Guardians have decided to expend £13,000 on the erection of a new hospital at the workhouse.

ROYAL INSTITUTION OF GREAT BRITAIN.—Acheson George Bartley, M.D., M.A., David Edward Hughes, Esq., F.R.S., and George Law, Esq., F.R.G.S., F.Z.S., have been elected members of the Institution.

THE EASTBOURNE NEW MEMORIAL HOSPITAL will, it is expected, be opened by the Prince of Wales in the spring. The collections and proceeds of a concert amount to £2280, but much more is required to enable the institution to start free from debt.

VACCINATION GRANTS.—The following gentlemen have received the Government grant for efficient vaccination in their respective districts:—Mr. William Dobson, Holbeck Union, Leeds; Mr. J. Hamilton, Gresley district, Burton-on-Trent Union (third time); Mr. Roberts, Barnoldswick (third time).

REMARKABLE FECUNDITY.—A woman aged fifty-seven, living at Aberdare, is stated to have borne no fewer than thirty-two children. The prolific mother had had twins on three occasions, triplets twice, and once four at a birth. The father was in receipt of parish relief, which, perhaps, is hardly surprising.

AT a meeting last week in the parlour of the Mayor of Manchester resolutions were carried to the effect that it is desirable that a museum be erected in connexion with Owens College, and that a fund of not less than £50,000 be raised for the purpose. The buildings are to be constructed from a design by Mr. Alfred Waterhouse, under instructions from the Court of Governors of the College. Promises of sums to the amount of £20,000 have been received, and for the remainder of the cost a canvass will be made.

SOCIETY FOR THE RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—A special general meeting of the Society was held on Friday, November 24th, at 5 P.M., to confirm certain alterations of the by-laws that had been approved at a special general meeting held on November 3rd. The President, Sir George Barrows, Bart., took the chair. The chief

alterations made in the by-laws were as follows:—The sum required to qualify as an honorary member was reduced by ten guineas; the proposals for membership and the declarations of widows and orphans may now be signed by two registered medical practitioners, instead of by two members of the Society; the admission fee was abolished; the income of the widow eligible for relief was raised from £50 to £80, and certain powers were given to the directors to make extra grants under special circumstances; the age of the orphans eligible for relief was raised to sixteen years, and in the case of complete orphans to eighteen, and the amount of income of orphans was also increased; in the case of a widow of a member marrying she now ceases under the new by-laws to have any claim on the Society.

CONSUMPTION HOSPITAL, BROMPTON. — At a quarterly court of the governors of this charity held at the hospital last week, it was announced that since the last court necessary and extensive repairs to the east wing had been effected, the inmates having been temporarily removed to the new building opposite, in order the more thoroughly to carry out the work. The repairs to the west wing were now in progress, and when completed the patients would re-occupy the vacant wards in the older building. Should the state of the funds admit of it, a further portion of the extension building would then be filled with new patients.

COLLEGE OF PRECEPTORS' EXAMINATIONS. — The entries of candidates for the half-yearly examinations of the College of Preceptors, which began on Tuesday last, and were carried on simultaneously in London and at fifty-five local centres in various parts of the country, exceeded 8300, making, with those examined at Midsummer, close upon 13,000 for the year. A supplementary examination, for the preliminary literary subjects required for students of medicine, law, the Royal Veterinary College, the Pharmaceutical Society, and other bodies by whom the certificates of the College are recognised, will be held in March next in London and at four provincial centres—viz., University College, Liverpool; the Leeds Medical School; Queen's College, Birmingham; and University College, Bristol.

LONDON HOSPITAL MEDICAL CLUB.—On the evening of Nov. 30th a convivial meeting of the above Club was held at the Holborn Restaurant. Mr. James E. Adams presided, and was supported by a large number of members and their friends. The Club was founded in 1838, but an anniversary meeting of the gentlemen educated at the London Hospital was held as long ago as 1792, and very likely before that time, as the London Hospital Medical School was the first complete Medical School in the metropolis. Special interest attended the present meeting from the fact that the chairman's father, Mr. John Adams, was for twenty-four years the popular secretary to the Club. The toast of the chairman, proposed by Mr. Hutchinson, and of the secretary, given by Dr. Christie, were drunk with more than ordinary cordiality and with all honours. Allusion was made by the secretary to the loss sustained by the Club in the lamented death of Mr. George Critchett, and to the increasing prosperity of the Club, as shown by the constant augmentation in the number of members and of the balance in hand—more than £200.

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning at the latest.*

ADAMS, MATHEW ALGERNON, F.R.C.S.Eng., L.S.A.Lond., has been reappointed Public Analyst for the County of Kent.

BERNARD, GEO. PETERSON, L.R.C.P.Ed., L.F.P.S.Glas., has been reappointed Medical Officer and Public Vaccinator for the Flamstead District of the Hemel Hempstead Union.

BUTLER-SMYTHE, A. C., M.R.C.S., M.R.C.P.Ed., has been appointed Surgeon to the Hospital for Women, Vincent-square, S.W.

FINN, EUGENE, M.B., L.K.Q.C.P.I., L.R.C.S.Ed., has been appointed Consulting Physician to the North Infirmary, Cork.

GETTINGS, J. S., M.R.C.S., has been appointed Medical Officer for the Ogley Hay District of the Lichfield Union.

GORDON-JONES, W. G., L.D.S., has been appointed Honorary Dental Surgeon to the Princess Mary Village Homes.

GUEST, ALEX. H., L.R.C.P.Ed., L.F.P.S.Glas., has been appointed Medical Officer for the Second District of the Cheriton Union.

IRELAND, W. WOTHERSPOON, M.D.Ed., has been appointed Medical Officer to Miss Mary Murray's Hospital for Girls, near Prestonpans.

JACKSON, PAUL, L.S.A.Lond., has been appointed Resident Obstetric Assistant at Westminster Hospital, vice C. H. Wise, M.D.

JESSETT, FREDERICK B., F.R.C.S.Eng., has been appointed Surgeon to the General Dispensary, Bartholomew-close, vice Morrant Baker, resigned.

LE QUESNE, EDWIN JOSEPH, L.R.C.P.Lond., M.R.C.S., L.S.A.Lond., has been appointed Medical Officer and Public Vaccinator for the Tring District of the Great Berkhampstead Union, vice Lipscombe, resigned.

LLOYD, JAS. HELLINGS, L.R.C.P.Ed., M.R.C.S., has been appointed Medical Officer for the Culliompton District of the Tiverton Union.

OSBORN, CHARLES, L.R.C.P.Ed., M.R.C.S., L.S.A.Lond., has been reappointed Medical Officer of Health for the Bognor Urban Sanitary District.

ROBERTS, ALFRED, M.R.C.S., L.S.A.Lond., has been appointed Consulting Surgeon to Prince Alfred Hospital, Sydney, New South Wales.

ROUNDTREE, THOMAS W., M.D., has been appointed Resident Surgeon and Apothecary to the South Infirmary, Cork, vice Cummins, resigned.

SPENCE, WILLIAM JAMES, L.R.C.P. Ed., L.R.C.S.Ed., has been appointed House-Surgeon to the Bradford Infirmary, vice Hollis, resigned.

STRETTON, Mr. J. LIONEL, has been appointed Honorary Surgeon to the Kidderminster Infirmary, vice Samuel Stretton, resigned. Also Deputy Medical Officer to the Kidderminster Union.

STRETTON, SAMUEL, M.R.C.S., L.S.A.Lond., has been appointed Honorary Consulting Surgeon to the Kidderminster Infirmary.

WEBBER, WILLIAM W., M.R.C.S., L.R.C.P.Ed., has been appointed Medical Officer to the Nos. 1 and 2 Crewkerne Districts of Chard Union.

Births, Marriages, and Deaths.

BIRTHS.

BOWEN.—On the 25th ult., at Kirkley, South Lowestoft, the wife of Edward Bowen, M.R.C.S., of a son.

BRUCE.—On the 25th ult., at Alva-street, Edinburgh, the wife of Alexander Bruce, M.B., of a son.

CURGENVEN.—On the 1st inst., at Friar Gate, Derby, the wife of Dr. W. G. Curgenven, of a son.

SWAINE.—On September 25th, 1882, at Ranchee, Chota, Nagpore, Bengal, the wife of Surgeon F. R. Swaine, M.B., Bengal Medical Service, of a daughter.

MARRIAGES.

BIGGS—HOPKINSON.—On the 28th ult., at the Church of the Holy Trinity, Taunton, John Maundy Biggs, L.R.C.P., of Child's-hill, N.W., son of J. G. Biggs, Esq., of Darlington, Sussex, to Florence Elizabeth, second daughter of the late T. B. Hopkinson, Esq., of Neasden, Middlesex.

FIELD—BURT.—On the 2nd inst., at St. Stephen's Church, Hampstead, by the Rev. J. Kirkman, Vicar, assisted by the Rev. J. P. Flood, Chaplain of Guy's Hospital, Alfred Field, Esq., of Leam, Leamington, to Margaret Elizabeth Burt (of Guy's Hospital), eldest daughter of the Rev. J. T. Burt, Rector of Stoke Doyle, Oundle, Northamptonshire.

GRIFFITH—ROBERTS.—On the 21st ult., at St. Marylebone Church, J. T. Griffith, L.R.C.P., L.F.P.S.Glas., of Llwyn-onn, Penygroes, North Wales, to Harriet Annie, youngest daughter of the late John Roberts, of Marylebone.

DEATHS.

BURROWS.—On September 27th, at Rangiora, New Zealand, W. A. Burrows, M.R.C.S., eldest son of the late William Burrows, M.R.C.S., of Islington, from injuries received in a carriage accident, having survived his wife twenty months.

CROSS.—On the 3rd inst., at Nile Cottage, Gillingham, Chatham, Alexander Cross, Deputy Inspector-General of Hospitals and Fleets, aged 77.

DEARSLEY.—On the 22nd ult., at Skulga, co. Tyrone, Charles Dearsley, M.R.C.S., of Milford Haven, aged 64.

HANKS.—On the 3rd inst., at Mile-end-road, E., Henry Hanks, L.R.C.P., M.R.C.S., L.S.A.Lond., aged 54.

LAWRENCE.—On the 30th ult., at Claverton-street, Bath, Geo. Edgar Lawrence, L.R.C.P.Lond., M.R.C.S., aged 32.

O'FARRELL.—On the 25th ult., at Tangier, Boyle, Ireland, Harward O'Farrell, M.D., F.R.C.S.I., J. P., aged 71.

SARJEANT.—On the 28th ult., at Eardley-crescent, West Brompton, Arthur Sarjeant, F.R.C.S., aged 63.

SMITH.—On the 30th ult., at Retford, Frederic Smith, M.R.C.S.E., L.S.A., late of 730, Old Kent-road, London, aged 45 years.

WILSON.—On the 30th ult., at Percy Lodge, Sandown, I. of W., William Samuel Wilson, L.R.C.P.Lond., M.R.C.S., son of the late Frederick John Wilson, aged 43.

N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

METEOROLOGICAL READINGS.

(Taken daily at 5.30 a.m. by Steward's Instruments.)

THE LANCET OFFICE, Dec. 7th, 1882.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Max. Temp. Shade.	Min. Temp	Rain fall.	Remarks at 5.30 A.M.
Dec. 1	30·01	S.E.	34	34	..	36	27	..	Foggy
,, 2	30·11	S.E.	30	..	..	45	24	..	Foggy
,, 3	29·74	S.W.	45	44	..	52	27	..	Overcast
,, 4	29·05	W.	42	41	..	47	30	·09	Cloudy
,, 5	29·04	N.W.	39	35	..	41	34	..	Overcast
,, 6	29·19	N.W.	36	35	..	37	33	..	Overcast
,, 7	29·14	E.	33	32	..	36	26	..	Overcast

Medical Diary for the ensuing Week.

Monday, Dec. 11.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.
MEDICAL SOCIETY OF LONDON.—8.30 P.M. Mr. Richard Davy will exhibit his Invalid Carriage.—Mr. Walter Pye will show the Subject of a Hairy Mole treated by Transplantation of Skin.—Mr. Rose will show a Case of Talipes treated by Excision of Tarsal Arch.—Dr. C. Theodore Williams, "On a Case of Bronchiectasis treated by Tapping."

Tuesday, Dec. 12.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.
ANTHROPOLOGICAL INSTITUTE OF GREAT BRITAIN AND IRELAND.—8 P.M. Mr. A. L. Lewis, "On some Flint Implements and Flakes from Cape Blanc Nez (near Calais)."—Mr. A. W. Howitt, "On the Australian Class Systems."
ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8 P.M. Ballot. 8.30 P.M. Mr. Frederick Treves, "On Resection of Portions of Intestine." The paper will be illustrated by diagrams and pathological specimens.

Wednesday, Dec 13

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.—Skin Department: 1.45 P.M., and on Saturday at 9.15 A.M.
HUNTERIAN SOCIETY.—7.30 P.M. Council Meeting.—8 P.M. Dr. Ormerod, "On Two Cases of Locomotor Ataxy, with Joint Disease."—Mr. R. Clement Lucas, "On Cases of Wounds of Large Vessels."
ROYAL MICROSCOPICAL SOCIETY.—8 P.M. Ordinary Meeting.

Thursday, Dec. 14.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.
NORTH-WEST LONDON HOSPITAL.—Operations, 2½ P.M.
OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.—3½ P.M. Mr. Mules: (1) "On a Case of Hydatid Cyst in Orbit;" (2) "On a Case of Panophthalmitis from Purulent Ophthalmia."—Mr. Ledlard, "On a Case of Ivory Exostosis of Orbit."—Mr. Snell, "On a Case of Hard Chancre at Inner Canthus."—Cases of Central Ambiyopia in Diabetes, by Mr. Lang, Mr. Lawford, Mr. Stanford Morton, Dr. Edmunds, and Mr. Nettleship.—Living and Card Specimens at 8 o'clock.—Dr. Samuel West, Sequel to a Case of Optic Neuritis; Mr. Gunn, Case showing Peculiar Appearance in the Retina; Drs. Edmunds and Lawford, Optic Nerve from a Case of Diabetes; Dr. Stephen Mackenzie, Drawings showing Extreme Tortuosity of Retinal Vessels.

Friday, Dec. 15.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.

Saturday, Dec. 16.

KING'S COLLEGE HOSPITAL.—Operations, 1 P.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.
All communications relating to the editorial business of the journal must be addressed "To the Editor."
Lectures, original articles, and reports should be written on one side only of the paper.
Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.
We cannot prescribe, or recommend practitioners.
Local papers containing reports or news-paragraphs should be marked.
Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

PAYMENT FOR MEDICAL CERTIFICATES OF THE CAUSE OF DEATH.

H. D.—In the 20th Section of the Births and Deaths Registration Act, 1874, it is enacted "In case of the death of any person who has been attended during his last illness by a registered medical practitioner, that practitioner shall sign and give to some person required by this Act to give information concerning the death a certificate stating to the best of his knowledge and belief the cause of death." This Act, therefore, declares that the certificate shall be signed and given, but makes no provision for any payment to the certifying practitioner. It may, moreover, be inferred that the Act contemplated no such payment being made. At the same time there appears to be nothing in the Act to make such a charge distinctly illegal, although, inasmuch as the certificate must, in accordance with the above-mentioned section, be signed and given, it would be clearly illegal to make the giving of such certificate conditional on payment of such charge.

Surgeon.—First by the largest number of votes, or, in the event of the numbers being equal, by priority of registration.

VICARIOUS MENSTRUATION.

To the Editor of THE LANCET.

SIR,—The following particulars may suffice to convince your readers that my case is sufficiently proven as to diagnosis. Mr. E. J. Collyns has asked some pertinent questions which might have been inferred by the reader of my previous letter; and being already aware of your limited space, I did not give special details. Curiously enough, just as THE LANCET reached me my case "turned up" again. She says—"It was four months before the bleeding came on out of the eyes that I had seen anything. I have never been regular. What I have seen previously was scanty, but very high coloured. I have never had the same (symptoms) before, but always great pain in the head and very bilious" (pointing to forehead over frontal sinuses); "when I am going to be so I have great pain in the body and legs, and my head is dreadful, and my eyes are very painful, so that I could (implied from her way of expressing herself) tear them to pieces." These are her own words, taken down at the time I now write, and they only serve to confirm my perhaps too hasty diagnosis, according to Mr. Collyns. The only difference in her statement appears to be that the menstrual flow, instead of being colourless, as I understood her at first, is high coloured and scanty. Now I asked her this time to state as clearly as possible her symptoms, and she said—"I have a dreadful pain in my head and I am afraid the bleeding will come on again." There is no congestion of the cornea this time, so I asked—"Are you expecting the usual flow?" and she replied—"I am now unwell, but very slight; your medicine did me good last time, and I have come to you for some more." I prescribed some compound decoction of aloes in the same mixture, as she was constipated; and I do not think I shall venture to try baseline for this affection; it is a remedy, in my opinion, still *sub judice*, and the information Mr. Collyns appears to give consists of dubious remarks. A correspondent of a less dubious character informs me that Professor Paget of Cambridge reported a case to the Cambridge Medical Society of a similar character, where a young woman had hæmorrhage into the anterior chamber of the eye at each menstrual period, and in addition from the nipples. If your correspondent has any further doubts he had better refer back to your columns, as I have had the misfortune to forget the date when inserted. The watching of this case has rather tended to confirm my diagnosis; and I am perfectly well aware that hæmorrhage from the eyes, nose, and mouth may occur from other conditions; but coming on just before, or during the time of, menstruation, without evident cause, would always excite my suspicion in an otherwise healthy subject, especially if the flow were scanty and irregular and the patient virtuous. The bleeding from the eye has not recurred, and I attribute this to timely interference.—I am, Sir, your obedient servant,

York, December 4th, 1882. G. DE COURCY MORRIS, M.D.

CEYLON MEDICAL COLLEGE.

A SYNOPSIS of the curriculum in force at the above College for 1882-83 has reached us. Five years of medical study are prescribed, the first three comprising the junior, and the last two the senior, course. In the first year, the subjects include anatomy, elementary chemistry, elements of zoology, practical vaccination, practical pharmacy, clinical medicine and clinical surgery, dissections, physics, botany, and biology. At the end of this year an examination is held in elementary anatomy, botany, physics, pharmacy, and biology for the first professional. The subjects for the second year are anatomy, physiology, chemistry, materia medica, clinical medicine and surgery, hospital practice, and dissections, in all of which subjects a compulsory examination is held. The third year embraces the same subjects as those of the second year, with the addition of surgery and practical chemistry, and at the end thereof the students are examined in anatomy, physiology, chemistry, and materia medica for the junior pass or second professional examination. For the fourth year the subjects are medicine, surgery, operative surgery and surgical anatomy, clinical medicine and surgery, hospital practice, medical jurisprudence, midwifery, and pathology, in all of which a compulsory examination is held. In the fifth year the same subjects are prescribed, with the addition of hygiene, diseases of women and children, practical midwifery, and ophthalmic medicine and surgery. At the end of this year the final examination is held in all the subjects with the exception of pathology, ophthalmology, chemistry, botany, and physiology. Dr. J. L. Vanderstraaten is the principal of the College.

A. M. D.—Our correspondent is thanked for his letter, but we cannot publish it, as he will see that events have turned out very different from his anticipations.

Mr. Robert Hugh Hodgson.—The practitioner referred to has a very honourable degree, though not registrable in England.

BOLINGBROKE HOUSE PAY HOSPITAL.

To the Editor of THE LANCET.

SIR,—Will you allow me to correct an error of figures in your notice of the second year's report of the work done at the Bolingbroke House Pay Hospital, which appears in this week's LANCET. A critical reader of the notice would ask the question—How is it that with double the number of patients in 1882 as compared with 1881, the cost of each patient has increased? The average weekly cost of each patient for 1881 is wrongly quoted in your notice. It should be £2 5*s.*, not £2 0*s.* 5*d.*, and as in 1882 the cost has decreased to £2 0*s.* 11*d.* the institution has made a decided advance nearer self-supporting point. In fact, the increase of self support by the payments of the patients has been 6½ per cent. This improvement is not the result of increased average payments, for actually there is a slight decrease—£1 10*s.* 6*d.* in 1881, £1 10*s.* 1*d.* in 1882—but is accounted for by the increased number of cases admitted. This tends to confirm me in the opinion expressed in my first report to the committee in 1881, that "if in the future the patients sufficiently increased in numbers and maintained their weekly average payment of £1 10*s.* 6*d.*, they will pay their cost." It is desirable therefore that all who are interested in the experiment of providing pay hospitals for the lower middle and artizan classes should help to make the institution known. Its success depends much upon publicity, for treatment in a hospital is not a daily requirement like food and clothing, and people must be taught to remember where to go when sickness comes upon them. The fact that they have so often resorted to charitable hospitals makes the task of teaching them that they should pay for medical treatment according to their means all the more difficult and slow to accomplish. But this reform will be gradually worked out and the "father" of the pay hospital movement, Mr. Burdett, takes much encouragement, I believe, from the results achieved at Bolingbroke House in the second year of its existence.

There is an important element in the scheme for providing pay hospitals and departments which remains undealt with. The small paying power of many patients is the seemingly insuperable difficulty. A large proportion of the applications I receive is from persons who state their willingness to pay seven or eight shillings weekly and plead their inability to pay more. Although I believe that, as a rule, the most people can pay is the least you will take, yet there must be very many who are able only to pay a sixth part of their cost, and the question is whether to admit five-sixths of the charitable element into the scheme. On the other hand, it may be contended that a patient cannot live in the ordinary way outside on seven or eight shillings weekly, and if he can pay no more he is a fit case for a charitable hospital. With sickness wages often stop, and if a patient presents himself saying "I have sufficient laid by to give me a few weeks' treatment in a pay hospital, if you will receive me for seven or eight shillings, and I prefer to pay to being cured on charity," it seems a wrong thing to decline him. Where shall the "charitable" end and the "pay" begin, or shall the two elements combine in one scheme?

I desire to thank you on behalf of Canon Erskine Clarke and the committee for the kind notice you have given of the second year's report of Bolingbroke House, and I shall be pleased to send a copy of it to anyone interested in this important subject.

I am, Sir, your obedient servant,

J. S. WOOD, Honorary Secretary.

Woodville, Upper Tooting, S.W., Dec. 4th, 1882.

CLOAK ROOMS FOR LADIES.

ON this subject *A Victim* writes to us:—

"The inconvenience, not to say positive suffering, from there being no cloak rooms for ladies in the main thoroughfares and principal streets, is very great. The facilities of getting from place to place in the metropolis, and the vast extent of London, not infrequently take ladies and women of the artisan and working classes away from their homes, either on visits or business of one kind or another. The railway stations are few and far between. In Paris, cloak rooms are to be met with in all the main streets. Birmingham is similarly favoured. But here in London such places are positively unknown. Affections of the bladder or kidneys make the want of these places almost an agony, and impossibility of getting relief when needed must induce disease. Can nothing be done in this matter? It is truly a great need."

Mr. A. Aitken.—Where the widows and orphans of medical men are not easily able to pay for medical services, it is customary for medical men to attend them gratuitously.

Dr. J. A. Campbell.—In an early number.

IMPERFORATE ANUS.

To the Editor of THE LANCET.

SIR,—The above being by no means rare, I forward particulars of the case on account of what was revealed at the post-mortem, and would be glad to know if any of your readers have heard of or seen a similar case.

I was called to attend Mrs. P——, in her third confinement, about 12 A.M., on Oct. 7th, 1882, but was unable to be present until 1.30 P.M. When I arrived the birth of the child (male) was just terminating. This was followed by a rush of liquor amnii, a great quantity of which the child received into its lungs, almost completely suspending respiration. Artificial respiration was kept up for some time, and breathing established, which was however a good deal embarrassed by the quantity of fluid still remaining in the lungs. On examining the child, the anus was imperforate. Immediate interference not being demanded, the case was left till next day, instructions having been given to keep up respiration. However, during the night the child died.

By permission of the father, Dr. Shirtliff (my principal, who was interested in the case) and I held a post-mortem. The rectum was found very much distended, lying deeply in the perineum, but no opening could be made out. A probe was introduced into the urethra, and, passing through a slight constriction, was found in that portion of the bowel which had been dissected out. Not being able to introduce the probe into the bladder, the abdomen was opened, without however finding that organ. The ureters were dissected out, and a bristle passed down was found in the rectum close to its junction with the urethra, clearly proving the absence of a bladder. All the other organs appeared normal. The nurse informed me the child had passed a very dark-coloured fluid which stained the napkins.

The immediate cause of death was no doubt due to the presence of such a large quantity of liquor amnii in the lungs, every effort having been made by the nurse to keep up respiration.

I am, Sir, yours truly,

JNO. P. TOPPING, M.B., C.M. Glasgow.

Kingston-on-Thames, Nov. 1882.

Mr. Geo. Wm. Ayres.—The circular has been mislaid. We should be glad of another copy.

Surgeon-General Cockburn.—Next week.

SUCCESSFUL GASTROTOMY IN JAPAN.

To the Editor of THE LANCET.

SIR,—I found the following remarkable account of a unique and scarcely credible surgical feat in a copy of the Hongkong *Overland China Mail* sent to me the other day. Considering the great interest and importance of the operation of gastrotomy, and the prominence it has recently assumed, I thought it might not be uninteresting to your readers to bring before them this tale of operative triumph from the Land of the Rising Sun. Albeit there is a smack of the fabulous about it, there is no reason to deny its authenticity.

I am, Sir, yours faithfully,

D. BEATTIE BAIN, M.B., C.M.

Tay-street, Dundee, November 27th, 1882.

"The *Choya Shimbun* tells an extraordinary story of skill and courage on the part of a Japanese doctor. It runs to the effect that one morning, as a certain man named Ito was cleaning his teeth, by some means or other he let his tooth-brush slip down his throat. Medical assistance was at once procured, and the unfortunate man, who was suffering the acutest agony, drenched with purgatives, but all to no avail. It was not till the fifth day that a certain Dr. Hashimoto, principal of the highest medical college in Tokio, was called in. Dr. Hashimoto said there was just one chance to save the man, and as the case was desperate it might as well be tried, for the patient would certainly die, and that almost immediately, if nothing was done. The friends consenting, chloroform was administered and two deep incisions were made cross-wise in the man's body. The stomach being laid bare, it was discovered that the tooth-brush was deeply embedded in it, and that, one edge of the handle being sharp, it had worked its way half through. The thing was speedily extracted, and the two wounds, inner and outer, deftly sewn up by the operator, who is said to have won immense renown by the success which crowned his efforts. The *Choya Shimbun* adds that the man to whom the accident occurred is now in a fair way of recovery.'

JOURNALISTIC ECONOMICS.

WE have to congratulate our military contemporary, the *United Service Gazette*, upon its discovery of the important principle of how to carry on a journal on truly thrifty principles! The week before last it copied one article, and last week two articles, from THE LANCET *verbatim et literatim* from beginning to end without the slightest acknowledgment of the source from which they were taken. *Proh pudor!*

N. E. R.—Bones are undoubtedly of value as a food, and their comparative cheapness is overlooked; but we doubt whether the plan suggested of utilising them for dietetic purposes would answer commercially. The nitrogenous material of bone being ossein, a gelatine, it would have to be supplemented largely with some albumen before it could be available as a constant food supply.

GAS FIRES.

To the Editor of THE LANCET.

SIR,—In my practice as an architect I have from time to time recommended the use of open gas fires, not only from their convenience and cleanness, but because, when more universal, their use will at least assist in abating the intolerable smoke nuisance arising from the ordinary open grate. I have three or four open gas fires in my own house. I am now informed, upon high medical authority, that these fires are most harmful. In a case which has recently come under my notice the gas fire (one of Verity's) has been instantly ordered out of the room, and in the same grate is now burning a coal fire.

The question I would ask is as follows:—Given a good grate and free updraught, is the heat radiated from burning coal harmless, and the heat radiated from asbestos, warmed by an atmospheric burner, dangerous? I write as a layman, not understanding these things, but feeling that a qualified opinion in the matter must be of great value, and I know not how to obtain this except through your columns.

I am, Sir, yours obediently,
Dean's-yard, S.W., Dec. 1st, 1882. SOMERS CLARKE.

*** Provided that there are efficient arrangements for the escape of the products of combustion, there is no objection on the score of health to the use of gas fires. We have known instances of these fires being fixed in ordinary grates, and in order to increase the amount of heat given off from them the register has been closed. This, of course, is inadmissible.—ED. L.

Mr. A. F. Blagg.—A medical man is not bound to attend unless summoned or ordered to do so by the coroner. A house-surgeon is not entitled to a fee in respect of cases dying in the infirmary.

Surgeon.—The coroner has a discretionary power. But, alas! he has not always discretion, and so the office is brought into serious disrespect.

J. H. (Newington).—1. No.—2. Yes.

ASSISTANT MEDICAL AND SURGICAL OFFICERS AT HOSPITALS.

To the Editor of THE LANCET.

SIR,—Allow me, as an old subscriber to and correspondent of THE LANCET for above forty years, to endorse your remarks of Nov. 18th as to the propriety and necessity of appointing assistant medical and surgical officers to all large hospitals, metropolitan or provincial. The proposal was made by me to the Board, staff, and subscribers to the Leeds General Infirmary above thirty years ago, but the suggestion was declined and ignored, though I proved by numerous statistics published at the time from the history of the largest hospitals at home and abroad that the appointment of assistant medical and surgical officers to do the work and take the place of worn-out seniors, when too much occupied with private practice, would be a benefit to the charities, the poor, the public, and the profession.

I am, Sir, your obedient servant,
J. INGHAM IKIN, F.R.C.S.
Park-place, Leeds, November 23rd, 1882.

Mr. H. B. Gilmour might with advantage consult the series of articles on Hospitals, written by Dr. Mouat, and published in THE LANCET, vols. I. and II., 1861.

Enesis.—The continuous galvanic current is the only one likely to be of service in such a case.

PUERPERAL SEPTICÆMIA.

To the Editor of THE LANCET.

SIR,—In your last issue you referred to a letter you had received from a correspondent on the prevalence of puerperal septicæmia in the practice of provincial hospital surgeons practising midwifery and the rarity of such cases in the practice of those unconnected with a hospital. I have repeatedly noticed the same thing, and have asked many practitioners unconnected with a hospital, both in my neighbourhood and elsewhere, whether they have had any cases of puerperal septicæmia. Their reply in every case has been in the negative. I should like to see the subject ventilated in your columns, as I think, with many others, that it is a very important one, and no party feeling, which you seem to think actuates the motives of your correspondent, should be mixed up in the matter.

I am, Sir, yours respectfully,
November 6th, 1882. FIDES.

MEDICAL ADVERTISING IN CEYLON.

AN advertisement has reached us showing that the art of advertising one's self by advertising one's book is not confined to a few members of the profession at home, but has a strong illustration in Colombo in the case of a long advertisement of a book on Diseases of Children, the contents of which are stated in a fashion the most likely to attract the eye and strike the mind of that "herd confused," the people. Such practices will be duly judged by the profession of Ceylon.

Dr. P. O'Connell (Sioux City, Iowa, U.S.A.).—Written memoirs for the Prix St. Paul may be signed by the author or not, as he may please. If not signed, they must bear an epigraph, and be accompanied by a sealed envelope, enclosing the author's name, and with the same epigraph written outside.

DISLOCATION OF THE SHOULDER.

To the Editor of THE LANCET.

SIR,—The daily routine of duties devolving on medical men in large general practices prevent, to some extent, their keeping themselves as thoroughly acquainted as could be wished with all the recent additions and improvements to surgical and medical literature; so that one's LANCET, or some other weekly periodical, comes to be looked forward to to keep us up to the current opinions, &c., of the day.

In this way THE LANCET for Nov. 4th last gave me a "wrinkle" for reducing a dislocation of the shoulder in the manner explained by M. Kocher, and on Wednesday last, Nov. 29th, I had an opportunity of testing, if I may say so, its value. A married man of about twenty-six years of age, of slight build, but fairly muscular, called on me, having had a fall off a tricycle, injuring his right shoulder. There was no great difficulty in diagnosing sub-coracoid dislocation. I sent him home and followed him there, and, after removing his clothes, I attempted the reduction by means of the heel in the axilla. He did not bear the pain of this at all well, so without further delay I proceeded to try M. Kocher's method, and, following his instructions, in less than two minutes we each felt and heard the head of the bone slip back into its place, and I must say I was highly gratified with the ease and simplicity with which it was reduced; and I should certainly recommend it to any of my fellow practitioners in a like case.

I am, Sir, yours very truly,
Queen's-park, Harrow-road, Dec. 4th, 1882. A. L. GRIFFITH.

Dr. Andrew Wilson (Edinburgh) is thanked, and his offer shall be borne in mind.

General Practitioner.—Certainly not.

CASE OF STRAMONIUM POISONING.

To the Editor of THE LANCET.

SIR,—With reference to Dr. Wigg's remarks on the case of poisoning by stramonium, reported by me in THE LANCET for Nov. 4th, will you allow me, in the interests of toxicology, to point out that where the term "berries" was used it was obviously as a quotation from the history supplied by the friends, the ordinary name, "thorn apple," occurring later on; and, in the second place, that it was the absence of the symptom of dryness of the throat which was commented upon. With regard to the identification of the poison, I may suggest that the seeds of stramonium are quite easily recognised. I must apologise for troubling you with these remarks, which would have been unnecessary had the communication been more carefully read.

I am, Sir, yours faithfully,
ALFRED LENDON, M.D.
Bristol Royal Infirmary, December 2nd, 1882.

A Subscriber to The Lancet.—We have no means of preventing the printing of extracts by local newspapers.

CLINICAL THERMOMETERS.

To the Editor of THE LANCET.

SIR,—Within the last month I have burst the bulb of two clinical thermometers. I presume it is caused by sitting too near the fire and exposing it to a heat of more than 115°. I carry my thermometer in the usual metal case in my waistcoat pocket. I have no doubt but the same accident will have occurred to other professional brethren. Can any of your readers offer any suggestions by which this mishap may be prevented?

I am, Sir, yours, &c.,
December 6th, 1882. M.D.

DUTIES OF SHIP SURGEONS.

To the Editor of THE LANCET.

SIR,—Will you kindly allow me to ask, through your columns, the kind of life led by a ship's surgeon on the Royal Mail Steam Packet Company's boats going to Jamaica and the neighbouring islands, giving an idea of how the day is spent, the duties of the surgeon, the accommodation, places where the ship touches, and the time away.

I am Sir, yours truly,
T. R. ALLINSON, L.R.C.P. Ed.
Kingsland-road, E., December 4th, 1882.

SPANISH MEDICINE AND SURGERY.

To the Editor of THE LANCET.

SIR,—Will someone inform me where in London I can obtain books on Medicine or Surgery in the Spanish language?—I am, Sir, yours, &c.,
December 6th, 1882. ESPANOLA.

"INUNCTION IN SCARLATINA."

To the Editor of THE LANCET.

SIR,—As this subject is one of considerable importance, kindly allow me to add a few words to the discussion. Inunction has done some good service, and should not be hastily condemned as a dangerous and perilous proceeding. No better means exist for isolating successfully scarlet fever cases among the crowded houses of the poor. It is easily applied, and its efficacy to prevent the spread of infection is believed in by the people who use it. I would be very sorry to disturb a growing popular faith which is so useful, unless there were sound reasons for doing so.

The objections that are brought against inunction are that it clogs the pores of the skin, and so checks perspiration, thus throwing the function of the skin on to the kidneys, and disposes to the sequelæ of albuminuria, dropsy, and rheumatism. If this is true, then inunction ought to be abandoned, and some of the other more cumbrous modes of daily disinfecting to be substituted. The objections seem to me to be based on the idea that inunction is just the same as varnishing the whole body or immersing it in oil. If inunction were in any way similar, I would at once admit the seriousness of the objections; but it is fortunately very different. The skin requires a certain amount of oily matter, otherwise sebaceous glands would not be placed all over the body excepting the palms of the hands and soles of the feet. In the febrile state the epithelium gets hard and dry, and the secretions of the skin are arrested. The rubbing in of oil makes the harsh epithelium soft and supple, and encourages perspiration instead of further checking it. This lubrication also lowers an elevated temperature, as I have on several occasions tested. If of benefit in the febrile stage of scarlet fever, it certainly can do no harm during the desquamative stage, but rather good, as the patients seem less liable to take cold; while it is of inestimable value in arresting the most pregnant source of infection, the shedding and scattering of the minute epithelial scales.

With this object I have for the last fifteen years used the oil in many serious epidemics of scarlet fever, and have been surprised at the rarity of albuminuria and dropsy where inunction has been used; while these sequelæ were common enough among those who did not use it. During the last two months I have had forty cases of scarlet fever in my district. Carbolised oil (1 to 30) was distributed. Two cases of dropsy occurred. On inquiry I found that in neither of these cases had the inunction been used.

The rubbing of oil into the skin cannot be so very dangerous, or it would not be so general a custom in eastern countries. It is the only toilet of some African nations, keeping the skin soft and its functions active under a scorching sun and in a hot, dry atmosphere. The ancient athletes oiled their bodies before entering on their contests, and Celsus recommends old oil to be applied with friction in fevers.

With this old and general use of inunction we never read or hear that anasarca was a usual accompaniment, as it ought to be if the theories of he objectors to inunction were the result of practical experience.

I am, Sir, yours very faithfully,

Sudbury, Suffolk, Dec. 4th, 1882. J. SINCLAIR HOLDEN, M.D.

P.R.S.—However pure may be the motives of our correspondent, he cannot without risk be a party to a compromise of the nature suggested.

CLINICAL SOCIETY.

To the Editor of THE LANCET.

SIR,—In your last issue, in the report of the Clinical Society, a *Mr. Travers* is mentioned as having spoken in the discussion on Subcutaneous Rheumatismal Nodes. This is a mistake; it should be *Mr. H. Fraser Stokes.* Apologising for troubling you,

I am, Sir, yours faithfully,

St. Paul's road, Highbury, N., H. FRASER STOKES.
Dec. 5th, 1882.

ON THE PURIFICATION OF THE AIR OF INFECTIOUS DISEASE HOSPITALS.

To the Editor of THE LANCET.

SIR,—In your leading article, p. 948, you refer to various schemes suggested for the prevention of infection from small-pox hospitals, which schemes appear to me far more expensive and complicated than the one suggested by myself for similar purposes. I claim by my system to be able, at a small expense, to destroy or remove all the organic, chemical, and inorganic elements existing in any volume of air, and to return the same, effectually cooled or warmed, to the building if desired. The details of this scheme have been several times brought before the notice of your readers, so that I need not occupy your space by a repetition thereof, but those interested may refer to the pages of THE LANCET—vol. ii., 1880, pp. 301, 359; vol. i., 1881, p. 35; vol. ii., 1881, pp. 787, 1101; vol. i., 1882, pp. 415, 544; vol. ii., 1882, p. 444; and also to various other medical journals.—I am, Sir, yours, &c.,

RICHARD NEALE, M.D. Lond.

Boundary-road, South Hampstead, N.W.,
December 4th, 1882.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Andrew Wilson, Edinburgh; Mr. Emrys-Jones, Manchester; Dr. Schofield; Dr. Herbert Davies, London; Mr. Somers Clark; Dr. D. Hack Tuke, London; Miss Dobson, London; Mr. J. Smyth; Dr. King, Chester; Mr. Lawson Tait, Birmingham; Mr. Aitken; Dr. G. de Courcy Morris, Walmgate; Mr. Morgan; Miss Bromley; Dr. D. S. Miller, Boston, U.S.A.; Mr. Brackett; Mr. J. S. Wood; Dr. H. Snow, London; Mr. Keay, Eastbourne; Mr. Griffith, Lowyn; Mr. Tweedie, Bengal; Dr. Lace, Liverpool; Mr. Frampton, Weston-super-Mare; Mr. Elliott, Carlisle; Mr. Burcombe; Dr. Swayne, Ranchee, Bengal; Mr. Hughes, Bromley; Mr. Lomas, London; Mr. Castanos, London; Mr. Robert Bruce, Edinburgh; Mr. Francis Lloyd, Malvern; Mr. Berkeley Hill, London; Dr. Truman, Nottingham; Mr. Jessett; Mr. W. H. Platt; Mr. Oakley, London; Mr. Hodgson; Dr. E. F. Neve, Edinburgh; Dr. O. Grant, Inverness; Dr. Rayner, Hanwell; Mr. H. A. Smith; Dr. J. B. Gill, Canterbury; Mr. Heelis, Barrow-in-Furness; Mr. G. Pound, Odiham; Mr. H. G. Edwards, Bangor; Mr. Stanley Herbert, London; Mr. Marmaduke Shield, Cambridge; Dr. Gabbett, London; Mr. E. M. Little, London; Dr. G. Bantock, London; Mr. A. L. Griffith, Harrow; Dr. London, Bristol; Mr. Lamb; Dr. Herman, London; Mr. Shears, Liverpool; Mr. Thrupp, London; Espanola; N. S.; W. T. C.; Surgeon; A Victim; J. N.; X., Monmouth; Chirurgus; A Twenty Years' Subscriber; &c., &c.

LETTERS, each *with enclosure*, are also acknowledged from—Mr. Brett, Bridlington; Dr. Elmslie, Westbury; Dr. Phillips, Seole; Dr. Easby; Dr. Willis, Monmouth; Mr. Cornish, Manchester; Messrs. Drew and Co., London; Mr. Hodgson, Chichester; Messrs. Prothero and Morris, London; Messrs. Cooke and Co.; Mr. Scattergood, Leeds; Mr. Hunt, Newtonville, U.S.A.; Mrs. Rahm, Ipswich; Mr. Robinson, Wemyss Bay; Mr. Boys, Sidcup; Dr. Nattress, Sunderland; Mr. Thompson, Liverpool; Mr. Lloyd, Sittingbourne; Mrs. Took, Great Berkhampsted; Mr. Mason, Brixton; Miss Starkey, London; Dr. Duncan, Australia; Mr. Audley, Stoke-on-Trent; Messrs. Johnson and Co., Southport; Mr. Ward, Twickenham; Mr. Roch; Mr. Hymus, Cambridge; B. E.; Surgeon, London; P. S., Dublin; Protozoa; H. H., Leeds; F.R.C.S., Manchester; M. S, Brockley; C.; Agathos; Nemo; Wykehamist; B., Old Kent-road; W. G.; Principal, Seaford; Arran; Delta; Alpha, Sydenham; W. T., West India road; Camberwell; P., Paignton; Medicus, Leicester; Veritas, Gower-street; T. J. C., Oldham; &c. &c.

Lancaster Guardian, Western Mail, Evening Express, Sunderland Daily Echo, Northern Evening Mail, &c., have been received.

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